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Farm Department.

Conducted by J. H. Brown, who lives on his farm at Climax, Mich., which is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Climax, Mich.

THE EDITOR'S FARM NOTES.

LIVE STOCK SANITARY QUERIES.

I see hog cholera is hanging on this winter and I have had one siege of it. Is Sec'y. Wilson's "cure" a success?

What is your plan for disinfecting hog pens and yards? What is the best preventive to feed sick hogs? Tell us all you can about it through The Farmer.

Genesee Co., Mich.

SUBSCRIBER.

The above postal is one of several letters and postals recently received containing queries along this line.

The experiments conducted by the Department of Agriculture, in Page Co., Iowa, included various "treatments" for hog cholera and swine plague.

The inoculation of serum, as described in The Farmer a few weeks ago, seemed to prove effective in a majority of the cases tried; but we fear that general and continued experiments will fail to confirm this treatment as a "cure" of these swine diseases, in the generally understood acceptance of the term.

Although we hope, of course, that a "cure" has been discovered, yet we are fearful that it will turn out as did the experiments of Dr. Billings several years ago.

One of the best disinfectants, cheap and easily applied, is one-half pound of fresh lime to each gallon of water. Dissolve in the water and apply immediately. To each gallon of this solution you can add two ounces of carbolic acid, or one and one-half ounces of commercial sulphuric acid.

By means of any sort of sprinkling can you can thoroughly saturate all the litter, floors, sleeping places and feeding troughs in the hog pen. Do this frequently, even when no disease is present, and you may be assured that you have done your duty in destroying encroaching germs.

The "preventive" to which you refer is probably a "condition powder," and the Department of Agriculture has selected and recommended the following among all the various formulas tried in all portions of the country:

Wood charcoal	1 pound
Sulphur	1 "
Sodium sulphate	1 "
Antimony sulphide	1 "
Sodium chloride	2 "
Sodium bicarbonate	2 "
Sodium hyposulphite	2 "

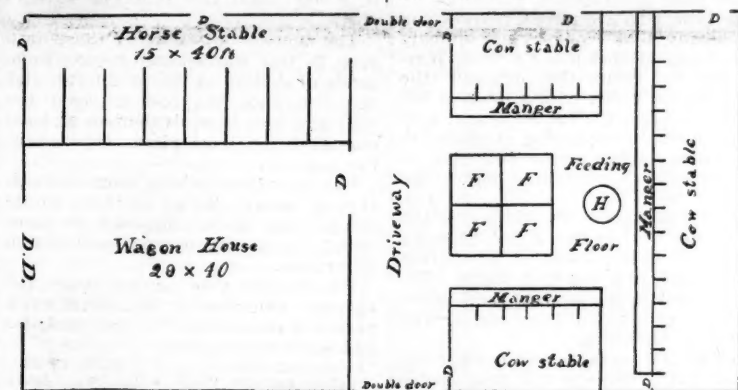
These ingredients should be thoroughly pulverized and mixed together by the druggist of whom you obtain the above. See that he does a good job of it, as sometimes we have found more or less carelessness shown after the ingredients are thrown together.

Dose, one large tablespoonful of the mixture once a day for each 200 pounds weight of the hogs to be treated. The medicine should be given in soft feed, as corn meal or ground oats, or crushed wheat, mixed with bran, or

middlings well moistened with hot water.

Animals that are too sick to eat the mixture should be drenched with the medicine, well shaken up in water. This can be done by slipping a noose over the upper jaw or snout of the animal and elevating its head sufficient to allow the medicine to be poured from the horn or drenching bottle into the corner of the mouth. Pull the cheek away from the teeth and let the medicine run into the pouch thus formed. Great care should be exercised in drenching hogs or they may be suffocated. The medicine should be poured slowly and time given for the animal to swallow.

This medicine is also recommended as a preventive to these diseases, and for this purpose should be put in the feed of the whole herd, taking care that each animal receives its proper share. It is also claimed to be an excellent appetizer and stimulant to the processes of digestion and assimilation, causing unthrifty hogs to assume a



FLOOR PLAN OF HANDY BARN.

thrifty condition and take on flesh.

It must not be forgotten that in order to secure good results from this treatment, diseased animals must be kept in dry and comfortable quarters and fed on soft and easily digested food. The sick should be separated from the herd, but the sick and well should be treated alike, in order to cure the former and prevent the incubation of the disease in the latter. Prevention is far cheaper than a costly course of medical treatment that is almost sure to fail.

DANGER OF AN EPIDEMIC NEXT SEASON.

As swine plague seems to "hang on" during the present winter in so many localities in this State, we wish to urge every brother farmer to use every precaution to prevent an outbreak in his neighborhood. See that your neighbor does his duty also. Secure a copy of the State sanitary laws from the Secretary of State at Lansing.

THE SLAUGHTER HOUSES.

These must be thoroughly looked after, to see that the owners conform with the laws and local board of health regulations. In case of an outbreak these houses cannot be too closely watched, especially if located on or near the banks of a stream of water.

WHY WHEAT SHOULD BE SOWN SHALLOW AND ON A COMPACT SEED BED.

Because if compacted the moisture is

held down under the dirt mulch. There will also be a far better and healthier growth of plants and roots in the fall on shallow seedling.

Just before sowing the wheat the surface should be cultivated just deep enough to allow the seed to be deposited by the drill about one to one and one-half inches deep. If the ground is not compact and well pulverized, the seed bed is in poor condition to germinate and carry the wheat plants through the vigorous winter and the alternating freezes and thaws of spring.

The wheat is not so badly injured by the freezing and thawing on a well-compacted and pulverized seed bed, for this reason: When the seed germinates the roots run down but a short distance before striking the compacted soil. If the top growth during the fall has been up to or above the normal condition the roots have correspondingly grown. Much of this root growth will be lateral, and the upper two inches of surface soil will be completely filled with roots.

work when the warm weather comes on, and it fails to stool out and thicken up.

On the other hand, the wheat on the well-compacted seed bed is intact, roots and all, when the warm weather opens. The heavy mass of roots are ready to do their part in search of food, and to multiply and support the stalks above right from the start when the frost leaves the ground.

For The Michigan Farmer.

A HANDY BARN.

Seeing the inquiry of W. H. S. in your paper of Dec. 4, I enclose a ground plan of a barn that might interest him.

The barn is 44x86 feet, twenty-foot posts, all two stories, with the exception of the driveway, which is twelve feet wide. Height over horses and wagon house, eight and a half feet in the clear. Height over cow stable seven feet.

Driveway in end of barn into wagon house. Horses after unhitching can be led into main floor, then into horse stable.

Horse stable fifteen feet from front of mangers to outside wall. Stall partitions nine feet from front of manger; stalls five feet wide from center to center.

Cow stables ten feet from stanchions to outside wall. Mangers sixteen inches at bottom, two and a half feet at top, three and a half to four feet high. The stanchions are three feet from center to center.

This barn should stand with the end to the road, so that the manure from the stables would all be in the back yard.

It will accommodate eight horses and twenty-six head of cattle, and will hold from eighty to 100 tons of hay, to be unloaded from the main floor, with horse fork or slings.

The wagon house will hold two or three wagons, and as many carriages. The grain bins, F. F. F. F., to hold feed for the stock, can be made full height of lower story, and will hold about 200 bushels each. H is the chute through which hay is thrown down to the feeding floor.

St. Joseph Co., Mich. W. G. SIMPSON.

SEEDING LOW GROUND.

Would like to know which is the best seed to sow on marsh, alsike or alfalfa? Or, perhaps, there is some other seed better than either one. Have tried alsike, but was not very well satisfied with it.

The muck is quit deep in some places. Sowed it to rye last fall and seeded with timothy. Please answer through The Farmer.

Jackson Co., Mich.

M. F. MUNITH.

(Sow red top instead of either alsike or alfalfa on such land as this. You might also test a little orchard grass.

If this land is well drained, we would advise experimenting with tall oat grass and meadow fescue, on one small patch, though it may prove too wet.—Ed.)

For The Michigan Farmer.

TREATMENT OF CORN STUBBLE GROUND.

I have a piece of clay corn stubble ground that I intend to put to wheat next fall, and want to sow something on this spring to plow under.

Do you consider rape or cowpeas a good crop for that purpose?

How should the ground be prepared and when and how sowed and how much per acre? At what stage would you plow under?

If you or some of the readers of The Farmer can give the information I would be much obliged.

Cass Co. Mich.

A SUBSCRIBER.

(As you did not sow rye last fall, we would suggest that you try either cowpeas or the Canadian field variety. If cowpeas, select the large Early Black.

You can sow the peas broadcast at the rate of two bushels per acre, then plow them under somewhat shallow.

We should prefer cutting up the ground with a disc harrow, if practicable, then sow broadcast ahead of the disc at the second time over the ground. If the disc can be used it will save plowing until the following fall.

Sow the cowpeas just as soon as all danger of frost is over. They will not be well podded before the middle of August, but we should prefer turning them under then so as to prepare compact seed bed for wheat.

This recommendation is under the supposition that you have but a few acres of corn ground to sow. For a large area your seed might prove expensive. For seed, prices, etc., write some of the seedsmen who advertise in The Farmer.

It is our personal opinion that the best plan would have been to have sowed rye last fall on this corn ground. This could have been turned under in June just before the rye headed out.—Ed.)

For The Michigan Farmer.

FARM EXPERIENCES.**GRUBBING AND BRUSH KILLING.**

We are having a very open winter in Northern Ohio, and at the present writing, Jan. 22, I could plow if it was the right time of year. As it is I am doing everything I can to advance spring work, doing such cleaning up and trimming as is usually done in March, with the exception of tree pruning, which I believe is better done after all danger of severe weather is surely past.

I see occasionally a farmer taking advantage of the unfrozen condition of the ground to clean up some overgrown fence row. We still have all through Ohio a good many of those nurseries of weeds and slovenliness, the Virginia rail fence and its latter day child, the patent stake and wire substitute, and judging from what one sees the owners of some fences of these kinds rather enjoy the annual brush mowing after haying, for they take no pains to make the job less or easier in this matter. The railroad corporations set them an example which is worthy of imitation.

Tree seeds are constantly springing up and the annual mowing of weeds converts these youthful forest trees into disagreeable grubs or shanks of trees. Once in two or three years a man is sent along with an adze and cuts them off just below the surface and in most cases they never sprout again.

The same thing can be done with a sharp mattock and I find it is the best time to do it when the ground is frozen. The stem is rigid and supported by the frozen earth and every blow counts. Then the grass is dead and weeds beaten down by the snow and it is easy to see what you are doing. More than all it can be done without taking time from other pressing work.

Where a fence is absolutely necessary and the mowing of brush and bramble is a resulting task, the summer's work can be greatly reduced by going along with a sharp mattock in the way mentioned and cutting off all woody growths and briar bushes. The summer mowing often fails to kill because the stubs of the year before interfere with close work. Open weather in winter is especially good for eradicating the creeping vine known as poison ivy, which is becoming a serious pest along the Ohio roadsides.

Men who are public-spirited in many things, do not hesitate to allow a patch of this nuisance to spread alongside their premises to the annoyance and misery of bare-footed children and others.

OTHER THINGS TO DO NOW.

In Illinois and farther west they ad-

vance spring work by breaking corn hills while the ground is frozen. A railroad iron some thirty feet long is used, a team being hitched to each end. This shaves the stalks off even with the top of the ground and the teams do not trample the ground as when done after open weather in spring. A log covering three rows at a time and drawn by one team answers every purpose where one has no iron.

The doing of this job upon frozen ground not only has the advantages mentioned but leaves the ground in better shape, as when done after frost is out many hills are pulled out whole and are a nuisance for months.

The farmer who grows grapes, blackberries and raspberries will of course, if he is wise, improve the warm days of winter in putting the vines in order so as not to have it on his mind when spring suddenly buds forth and there is everything to do. The grape causes scarcely any work which cannot be done in winter, and there is little excuse for any farmer who does not grow an abundance. By proper management the same may be said of the blackberries and raspberries. The trimming may be done in winter and by mulching heavily with straw the ground may be maintained clear of weeds without summer cultivation.

Ohio.

L. B. PIERCE.

(We are thinking of trying the railroad steel rail in our own cornfield this spring, but are inclined to believe the harrow preferable for this work, even though many hills are pulled out.—Ed.)

For The Michigan Farmer.

POTATO NOTES.

As an aid to potato producers these suggestions may not be out of place. Potatoes of the type of the Rural New-Yorker No. 2 average the largest returns per acre in bushels, as well as bringing the best price in the market.

Uniformed shape and size with the preference for white stock are the demands of the market, and it is as well in any case to cater to the popular demand.

Some phases of the potato for profit we will consider in this article, and to which any farmer may devote some of his time profitably.

To those who are near a market you can hardly find money more quickly than to pay attention to the early market, and the better the demand the more money. Even with a town of 800 inhabitants many a fat little sum may be gathered in by giving attention to this work, as few crops will give as large returns for the same outlay and labor.

In a small way we would advise the use of the well known Bliss' Triumph for moist, sandy loam, or a mixture of light soil and muck if warm. We have found none earlier than Bliss' Triumph, although it does not do well on dry or hard soil.

For an all round, early market the Extra Early Ohio is the first choice for any and all kinds of soil, with the Early Harvest a close second. At present we consider the latter the best all round early white variety in the market.

If the season proves warm enough for planting from the first to the tenth of April, potatoes may be secured for the market from the above varieties from about the fifteenth of June, in succession, as named. In latitudes where planting is earlier or later, the length of time in maturing will be about the same.

When there is a good demand for the market trade in August and the early part of September, nothing will give such returns or satisfaction as the Carman No. 1.

This variety should be planted on new ground, moist, sandy loam or muck. We have grown this variety since first introduced, and we do not hesitate to say that it stands alone in its class.

Now, a word to those who usually supply their neighbors with seed. The money in new varieties depends on their value in the long run. Very frequently highly advertised sorts are valueless to the practical grower, and unless proving of value on your own soil, they had better be discontinued. A sample tuber the first year, as a rule, is better than a barrel, and if it is a sure thing, buy the barrel next year.

If we had all the new teeth we have cut on the "new potato" question in the last eighteen years, we would start some sort of a manufactory in ivory. We have had several teeth filled with silver, gold and even greenbacks, in the most approved style. Re-

member this, a poor yielding sort is invariably a loss, while a smooth, clean, heavy cropper can always be disposed of at a profit. Be sure you are right, then push it along.

More especially is there money lost by growers planting too heavily of a new variety for their main crop, for many of the most promising sorts utterly fail under adverse conditions, and a cropper must be one that will stand "grief." Make haste slowly in discarding a potato that is doing well by you.

Now a word in general on the main crop potato. Our main crop late varieties to be planted this spring, will be the Carman No. 3, the best all round late white variety grown. Next in favor will be the Banner, a sort bearing a striking resemblance to the Carman No. 3, in appearance, growth, and yield a very close second. We shall retain the New Livingston, a special late table sort, long, white, with netted skin and pink eyes, a very heavy yielder, often producing 200 and 300 bushels per acre. One of its most valuable points is its table qualities. The Carman No. 3 was originated by E. S. Carman, and since its introduction it has been the heaviest yielder on our grounds.

In sending seed to different sections we have made a practice of sending samples of the most promising new sorts, unmarked, with the request to test with the best to be had, and as yet we have not received a report where the Carman No. 3 has been outclassed. Our prediction is that Carman No. 3 and Banner will soon set the pace, having all the good points of a grower, with shipping and storage qualities combined with fine quality.

It sounds like a rather large potato story when we say that we have a number of the Carman No. 3 of the 1896 crop, harvested in October of that year, that we have kept in a basket in the store since that time, and without any care whatever. They sprouted but little, no sprouts attaining the length of more than six inches. The loss in weight, however, has been about one-half. The temperature has been the same as any store during this time. We will see what they will do in a cool cellar this year and will report.

The success or failure of the potato crop in this State alone means thousands of dollars to the producers, and the difference in yield between the poor and best is equivalent to at least one-third the total yield throughout the country.

I suggest that with a more uniform type of potato, better markets would be secured, stock disposed of more readily, and with greater satisfaction all around.

We discard this season over 150 varieties as unworthy of general cultivation, making room for new varieties and more experiments.

Eaton Co., Mich.

W. E. IMES.

(This agrees with what we have heretofore stated regarding so-called new varieties of potatoes. We farmers cannot afford to largely plant so-called new varieties, so long as such standard and tried sorts are obtainable.—Ed.)

CAN THIS PLAN BE IMPROVED.

I have one field of rather light sand that is now sowed to rye, that I intend to plow under about the first of June, and then sow to buckwheat, plowing that under about September 1st and sow same to wheat.

Will it be likely to be a good plan to follow, or can you suggest a better one?

Iosco Co., Mich.

MARION COOMER.

(What do you say about this plan, brother farmer?—Ed.)

The Farmer's Health

Is a Matter of Importance When Spring Approaches.

Winter is leaving the blood impure. Spring humors, boils, pimples, eruptions and that tired feeling are the results. Hood's Sarsaparilla expels all impurities from the blood and makes it rich and nourishing. It cures all spring humors, and prevents serious illness.

Hood's Sarsaparilla

Is America's greatest medicine. Sold by all druggists. \$1; six for \$5. Get only Hood's.

Hood's Pills act easily, promptly and effectively. 25 cents.

THE YANKEE FIRE-KINDLER Burns 100 Pines with 5¢ of oil. No sootings. Warranted 3 years. Greatest Seller for Agents ever invented. Sample with terms prepaid, 10¢. YANKEE KINDLER CO., OLNEY, ILL. 27, Sta. 1.

For The Michigan Farmer.

SEEDS DRIFTING ON THE SNOW.

At my suggestion, two or three years ago, a student at the College studied this subject, and presented the results at the botanical club.

From melting snow banks, after most of the snow had disappeared, he collected a quantity in four different places, let it melt, strained the water, saving the residue of dirt and rubbish.

In one lot were a few seeds of June grass, sheep's fescue, wild buckwheat, lady's thumb, timothy, red clover, paper birch and lamb's quarters.

In the second lot were purslane, basswood, Norway spruce, birch, bull thistle, hop clover, sheep's fescue, and juniper. In the third lot were seeds of yellow foxtail, timothy, lamb's quarters and wire grass.

In the fourth lot were June grass, amaranth, (a weed), a rush, sweet vernal grass, blue vernal, spiked rush, beggar's ticks, ragweed, sedge, sheep's fescue, lamb's quarters or pig-weed. In this way, the weeds of many a farm invade the farm of a neighbor.

Mich. Experiment Station. W. J. BEAL.

(It seems as though such evidence as this might induce us farmers to be more careful about letting our neighbors' weed plants go to seed. Of course we are supposed to see that our own weeds do not "go and do likewise." The more we study this weed problem, the more we believe it necessary to take up (or down) all fences on the farm that can practically be dispensed with, especially cross fences.—Ed.)

BINDING CORN STOVER.

Thought I would give my experience in binding corn stalks with twine:

I tie a knot in the end of a string, draw up tight, wind twice around and loop under. I am feeding stalks that have been handled twice this winter. All I have to do is to find the end and give a jerk.

I think it is ahead of cobs or sticks, which I saw recommended in The Farmer of December 25th.

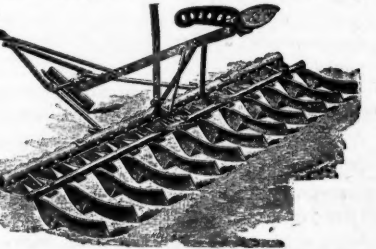
Jackson Co., Mich.

W. A.

(This was written by a young farmer ten years old, and dictated by his grandfather, who is past seventy. The plan suggested above is the same as recommended by several brother farmers last summer. We tried this style of tie and adopted it.—Ed.)

Spreading Manure.

Doubtless the machine manure spreader is a good thing to have, but it costs a lot of money, and makes one more machine to care for and protect. Experience with the "Acme" Pulverizing



Harrow, Clod Crusher and Leveler, goes to prove it a most excellent thing to spread manure in a quick and easy manner. You may leave the manure in heaps if you wish, but I would rather throw it off as evenly as possible, and then follow with this implement. It scatters, breaks up finely and spreads the manure evenly with the least possible labor, leaving it in excellent condition for the plow to follow. This work may be done in the leisure days of the winter.—HENRY STEWART.

"Improved Robbins" Potato Planter.

Below we illustrate the "Improved Robbins" Potato Planter, undoubtedly one of the most successful implements classed under the head of "potato machinery." It has become known wherever introduced as a perfect planter, and one in which all can place confidence. The construction and operation of the planter is very simple. The fertilizer feed is reliable, making an even deposit, while the fertilizer is thoroughly mixed with the soil before the seed is dropped. The



dropping of the seed is positive at equal distances and in a straight line without being bruised or punctured. The correct dropping of the seed is partly done automatically by the machine and fully accomplished by the boy. This planter is made by the Bateman Mfg. Co., Grenloch, N. J., who also manufacture the well known "Iron Age" farm and garden implements. Write for special catalogue and prices.

M. G. HARRISON, Centerville, Mo., an experienced cultivator of Ginseng, has written a book giving full details of the cultivation of this plant. See advertisement.

Livestock.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to MICHIGAN FARMER,
Detroit, Mich.

For The Michigan Farmer.

OLD OR YOUNG SOWS.

I would like to hear, through The Farmer from different swine breeders as to the relative value of old or young sows for raising pigs. My experience the past year with two Duroc-Jersey sows has been in favor of the young sow as a breeder. The year-old sow farrowed 12 pigs April 20, and raised them. Farrowed again October 3, having 16 living pigs. The two-year-old sow farrowed April 10, having 11 pigs. She raised them all. October 2, farrowed 14 living pigs. Sold two of young sow's second litter on November 10, making them 37 days old when taken from sow. The purchaser wrote me February 1st that four weeks after he bought them they weighed 162 pounds, and that on February 1st one of them weighed 151 lbs, being then three months and 27 days old. I think this pretty good for a young sow, farrowing 32 living pigs from April 20 to October 3. Would like to hear the experience of others.

W. H. PHUNDER.

Calhoun County, Mich.
(This is a good record for both sows, and especially so for the young one. There is a discrepancy in the figures given by our correspondent, but whether the mistake is in the total or in the number of one of the farrowings we cannot say. His figures are 12 in April and 16 in October, total 28. He gives the total as 32. It is the general opinion among breeders that fully matured sows make the best breeders and their litters are stronger. But there are exceptions to every rule, and Mr. Phunder seems to have been lucky enough to strike the exception.—Ed. Farmer.)

For The Michigan Farmer.

WHY SOWS EAT THEIR YOUNG.

Friend Cowdrey has stated once or twice in The Michigan Farmer that he thought it a good plan to give sows a chunk of fat pork to prevent them eating their young. He usually advocates only the soundest of agricultural doctrine; but I believe in this case he has allowed himself to be influenced by an old superstition, for I believe it is a superstition, with just as little substance as to the belief regarding pork from a hog killed "when the moon was on the wane."

Every condition has been brought about by a cause; and if a sow, whose natural instinct it is to protect her young, even at the risk of her own life if necessary, does such an unnatural act as to devour them, we must regard it as an abnormal condition brought about by some cause—usually by wrong methods of feeding.

Corn is cheap, and, moreover, is considered the natural food of hogs; therefore, I feel safe in saying that there is not one sow in a hundred but that gets an excess of the carbohydrates and fat in her daily ration. According to Wolff's standard, a growing fattening pig should have one pound of protein to five and one-half of carbohydrates and fat. If this is necessary in the case of the growing pig, how much more so in the case of the sow that is called upon to repair the wastes of her own body and at the same time furnish material—largely protein—for the formation and sustenance of eight or twelve others. It would be far safer to err on the other side and feed an excess of the nitrogenous materials, because protein may, if necessary, be converted into fat in the body or burned for fuel, while the carbohydrates and fat, which serve as fuel for the body, and to furnish heat and energy, cannot be used in building up bone and muscle. If, then, the nutritive ratio for a sow during the period of gestation should be 1 to 5 (or narrower), and we feed her chiefly on corn, which has a ratio of about 1 to 9, and besides during the winter months deprive her of all succulent food, which would serve to aid digestion and regulate the bowels, may we not expect that the excess of heat and fat-making material that she is forced to eat to satisfy hunger will cause conditions of feverishness and disordered digestion, that, being aggravated by the ordeal of parturition, culminate in the devouring of her own offspring; not to satisfy a depraved appetite, or for "pure cussedness," but in

a frenzied desire to supply her body with that of which she has been robbed—nitrogenous material?

I believe that all animals, and hogs especially, will do fairly well even when fed on a ration that is far from a "balanced" one. For instance, if too large a proportion of fat-making food is given, a part of the fat is probably rejected by the assimilative organs, that the true ratio may the nearer be maintained. If plenty of succulent food is fed the animal may suffer no very great inconvenience, yet it must result in a waste of food, of course.

Mr. Cowdrey, writing on cheap pork in "The Country Gentleman," states that he has a good quantity of sugar beets that he is feeding to his hogs this winter. That being the case, I feel sure that he will not be troubled with sows eating their pigs next spring.

In the article just referred to Mr. C. says he has half a dozen little lots that he turns the growing pigs into in succession, letting them "hog down" rye, peas, etc. This may do very well if land is plenty and cheap, but it may not be just the thing where the conditions are reversed. For me, I don't fancy the "hogging-down" plan very much anyway; hogs turned into a field of good feed that way are apt to show their natural propensity and eat so much that they get "cloyed." I have always found it a good rule to give an animal only so much as it could eat up clean and then be ready with sharpened appetite for the next meal. It might pay better where land is scarce and help plenty to grow the clover, peas, sweet corn, etc., adjacent to the hog lot, and cut and throw to them just about what they would eat up clean. Everyone ought to study the matter for himself and adopt the method best suited to his own particular conditions and style of farming.

F. M. HETZMANN.

Woodside Farm, Grafton Co.

HANDLING BEEF CATTLE.

The following extract is from a series of articles on the above subject, written by an Indiana feeder for The Prairie Farmer. His suggestions regarding feed and shelter are eminently sound and practical:

We will suppose that the stockman has collected his herd of feeding cattle. His next duty will be to provide them with comfortable winter quarters. This should be done early in the autumn, of course, and long before the weather is disagreeable, either for their construction or for the cattle that are to occupy them. Have just as good quarters as your means will permit. Keep constantly in mind the sound piece of advice that "a steer that is well-wintered is half-summered," for a truer agricultural maxim was never promulgated. In fact, nothing that grows for the farmer should cease to gain in weight, or be retarded toward maturity even for a moment, while it is in his care. Checked life in plant or animal, however short, can never be overcome and restored to pristine vigor. How many times have farmers been told in bulletins and agricultural journals that it is far cheaper to provide good shelter for the stock from winter storms, than to thoughtlessly depend upon the daily rations to keep up the required animal heat? And yet many a herd of cattle is to-day wintering in a breezy feed lot, with only a rail fence or a scattering clump of trees for a wind-break. This is without doubt the poorest kind of cattle feeding. On the other hand, it is surprising and gratifying, to say nothing of the profitable side of it, to note how quickly stock of any kind will respond to humane treatment. But I am not an advocate of stall-feeding beef cattle.

The barns used for such a purpose, in my observation, are too hot for the cattle. The herd needs just enough shelter to be comfortable, and to prevent the escape of the animal heat that is so necessary to assist in laying on flesh and no more. And you will soon note that each steer is his best judge as to the degree of warmth he wants. A number of years ago several prominent cattle feeders in Putnam county erected costly cattle barns, with stalls, feed troughs, and hay racks, in which to keep their stock during the winter. Those barns were never used after the second or third winter, because the owners found that in providing such shelter for their stock they had overdone the matter. The barns were too warm, even though they were fairly well ventilated. The heat from the bodies of the cattle created a steam that remained around and above them

all night, and the next morning when they were turned out for water and exercise they were badly chilled in consequence. It was just like a person sitting by a fire in winter time with all his wraps on, and then going hastily out into the cold. He was too warm with the wraps on in the house, and they gave him but little additional warmth in the wintry air outside. So with cattle. Nature has kindly supplied them with a warm coating of hair and, further, insures them from calfhood to withstand cold to a considerable degree; so that all they need, over and above what nature provides, is simply a sufficient shelter in which to retain warmth. Of this shelter some cattle will want more, some less, for some animals can endure severe weather much better than their mates. In this particular they are not unlike human beings.

Therefore, provide that kind of shelter, as nearly as possible, that will allow the stock the utmost freedom of action; to seek it, or stay out of it, just as they individually choose. An ample barn with wide feed sheds, provided with feed troughs and hay racks, but not stalled off; openings at both ends of the barn to allow the cattle easy egress or ingress; with proper windbreaks at these openings to prevent drafts or cold air through the sheds, is the very best, of course, for it not only provides good shelter, but admits of economical feeding. The cost of such a barn can vary as regards finish, material, and amount of extra help in its construction. A very cheap and effective shelter, and one that is within the reach of any cattle feeder, is simply a long shed, running east and west with an L on the west side running south. It is constructed very similar to fair ground stalls, with the exception that the posts must be of heavier material; it need not be built quite so high, four feet at the back being sufficient, and there are no partitions. The shed is built with the openings to the south. I used such a structure in my feed lot for several years, and I found it not only a cheap and commodious shelter, but it also greatly assisted in reaping good results in the condition of the cattle. Many a time I have dismounted from my horse in the feed lot and stood under the shed when the cold was intense and the wind howling over the wintry landscape, and allowed the sun's rays to strike full upon my boots, and I would actually feel a considerable degree of warmth thereby. Now the advantages of such a shed for cattle are several fold. It is a splendid windbreak, and nothing pinches cattle worse than cold winds, the sun shines in it for a good part of most days of the winter, keeping it warm and dry, and it allows the steers to choose for themselves just the amount of its protection they want. In my own herd I noticed that in severe weather the cattle that wanted plenty of shelter were always found snugly ensconced within the shed, those not requiring quite so much warmth were generally just outside, while the hardest steers of the whole herd were in the open space in front of the shed but entirely free from winds. With some additional expense such a shelter can be given a higher elevation, when first constructed and provided with feed troughs and hay racks at the back.

Veterinary Department.

CONDUCTED BY DR. W. C. FAIR.

Advice through this department is free to our subscribers. Each communication should state history and synopsis of the case fully; also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private practice, and a fee of one dollar must accompany the letter.

Heaves.—I have a horse that has the heaves. O. A. R., Ovid, Mich.—Wet his feed with lime water. Feed less bulky food.

Piles.—Three sow pigs have piles. G. L., Augusta, Mich.—Remove tumors with a knife and apply equal parts tannic acid and iodoform twice a day.

Collar Galls.—Five-year-old horse has sores come on shoulders when I work him. C. L. T., Richmondville.—Have bunches removed with knife. Wounds will soon heal.

Hernia.—Horse has bunch on belly in front of stifle joints. It moves back and forth when horse trots. W. W., Mayville, Mich.—Leave your horse alone. It does not hurt him.

Thrush.—Horse is lame in hind foot. When he steps on anything hard or if I rap the frog with a hammer he flinches. Has been lame a year. F. L., Kalamazoo, Mich.—Apply calomel to frog twice a day.

Grub.—Indigestion.—Sheep are losing wool, large handfuls coming out at a time. Animal then refuses to eat and gets weaker until it cannot stand, but lies down with head hanging to left side.

I find some sheep ticks on them. W. C. v. McBain, Mich.—Give one dram ground gentian in feed three times a day and thirty grains nitrate potash three times a day.

Distemper—Chronic Cough.—Three-year-old mare had distemper last June. Was very sick. Has had cough ever since. J. G., Lexington, Mich.—Give half an ounce powdered liquorice and one dram fluid extract opium in feed twice a day.

Parturient Apoplexy (Milk Fever).—Is there any way of preventing or curing milk fever? J. B., Denmark, Mich.—Milk fever is frequently fatal. Cows should be exercised before calving and fed less and purged thoroughly before and after calving. Deep milkers are usually the first to be affected and not until they have had their third calf.

Partial Dislocation of Stifle.—Mare has been affected nearly a year with crippling spells. When at work she drives and steps free; when standing turns head to one side and trembles and cramps. They are of short duration, occurring several times a day. F. M., Dimondale, Mich.—Blister over stifle with caustic balsam once every ten days and she will get well.

Indigestion—Shock.—What is the cause of my cow groaning and shivering after I gave her a small pail of water last night? She seems to be in pain by pells and will not eat; shivers as though she has a chill. W. S. E., Corunna, Mich.—The cold water shocks your cow and stops digestion until it heats to temperature of body. Give one ounce ground ginger in each feed. Give her epid water to drink. Add a little salt to water.

Indigestion—Nervousness.—After having been driven four or five miles my mare scours terribly. Have had a veterinary but he has done her no good. C. F. L., Houghton, Mich.—Have her teeth looked at by your veterinary. Give one ounce of the following mixture in each feed: Ginger, gentian, bismuth, bicarbonate soda and catechu. Give less water before and while you drive her.

Chronic Founder.—Have a five-year-old mare that is lame in both forward feet. Been so over a year. While running in pasture she jumped to get over the bars and got hung on them. Did not show any lameness until driven on road a week later. When traveling she tries to get her whole weight on hind feet. O. C., Vermontville, Mich.—Your mare suffers from soreness, the result of chronic founder. Blisters applied to coronets will help her.

Nail Puncture.—Horse stepped on a nail three weeks ago, causing lameness. Wound is near frog. His mate sprained her tendons in stepping on a rolling stone. H. H., Bradley, Mich.—Apply one part carbolic acid to twenty parts water to wound in foot twice a day. Do not drive him until he gets well. Blister mare's tendons with caustic balsam.

Chronic Grease Heel.—What will cure so-called "big leg" on my mare. Last winter both hind legs swelled up to the gambrel joints and she was very lame. This winter only one leg is swelled and she is not lame as yet. R. S. D., Oviatt, Mich.—Regular exercise, proper feeding and good grooming will help her. You will not succeed in reducing leg much before next spring. Give one dram iodide of potash three times a day. Do not wash legs or drive her much in wet.

True Type in Breeding.

Every intelligent breeder of animals of whatever kind knows that, all other things considered, the very best results come from rigid selection. Rigid selection is necessary because it is the only infallible means whereby animals may be secured



that are absolutely true to type. Any animal may be a good representation of a breed and yet not be a typical animal of that particular breed. We show herewith a cut of a typical animal. It illustrates the true type of the famous Ohio Improved Chester White hog, as bred by the L. R. Silver Company of Cleveland, Ohio. These people have bred in true blood lines for so long a time that they have produced a distinctive type of this valuable hog. Write them for circulars, prices etc.

The statements of those who have been cured by Hood's Sarsaparilla prove the great merit of this medicine. Get only Hood's.

AUCTION SALE, Thursday, March 10th, 1898. Few registered Holstein Friesian cows and heifers; 1 bull 18 mos. old, sired by De Kol 2d Butter Boy No. 21365; 1 bull eligible to registry 16 mos. old; 7 grade cows; also 50 Shropshire ewes.
W. M. S. JONES, Davisburg, Oakland Co., Mich.

AUCTION SALE, Tuesday, March 1st, at 2 p. m. 40 Head of Pure bred Poland-China HOGS.

Pedigrees furnished. Time given on approved notes. Parties coming to sale on train will be met at A. A. depot at 1 o'clock. Farm one mile south of Shepherd.
E. H. DOANE, Shepherd, Mich.

SEE THAT HOOK? WITH THE IMPROVED CONVEX DEHORNER
You can cut off any size, shape or kind of horn without crushing. No other dehorner will do this. Catalogue free.
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It is humane, rapid and durable. Fully warranted. HIGHEST AWARD AT WORLD'S FAIR. Descriptive circulars FREE.
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The Horse.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to MICHIGAN FARMER
Detroit, Mich.

SUNFLOWER SEEDS FOR HORSES.

To the Editor of The Michigan Farmer.

I wish to inquire through your paper whether or no sunflower seeds are anything like linseed meal as a feed for horses, to be used as a sort of condition powder? If so, how much of either should be fed at a time, and isn't wheat bran, with a little linseed oil mixed with it, about as good as linseed meal and cheaper? Linseed meal would cost me about \$5 per 100 pounds.

P. A. GILROY.

To your first question we can only say we know of no objection to the use of sunflower seeds as a ration for horses. Poultry thrive upon them. But we have never heard of them being given to horses. They are very rich in oil, and would have to be given in small amounts. To your second question we would say that linseed oil is frequently used in conditioning horses, and when added to bran would be just as good as oil meal. The oil is a great aid to digestion, and its use always improves the coat of the horse. Perhaps some of our readers have been testing sunflower seeds as a feed for horses, and if so can answer our correspondent from practical experience. The small amount grown in the State, however, has probably prevented its use as a feed for anything but poultry.

POULTICING HORSES' FEET.

The general custom of poulticing wounds when a poultice can be applied needs more than passing notice. It is the common practice after removing the shoe and paring the foot when a horse is pricked by a nail to apply a bran or flaxseed poultice, often leaving it on till the next day. Now, bran and meal are substances liable to hold germs; therefore boiling hot water is needed, and even boiling the poultice, to destroy the germs if antiseptic treatment is to be observed. The object of the poultice is to keep moisture applied to the part. This can be done by cotton waste, clean, of course, treated by saturation in a weak solution of bichloride of mercury, 1 to 1,000. There is less risk, and cotton will not turn sour, as bran and meal do.

When a foot injury is pared out bran and flaxseed will get into the wound, which is not always desirable. But when the foot is first covered with a piece of soft linen before applying the poultice the moisture is there just the same, and the foot is kept clean. Care is needed in paring the seat of a prick by a nail, for sometimes it is best left alone. The simple application of such an antiseptic as the chloride of iron or of antimony will suffice, and the risk attending cutting out is avoided. The bacillus of tetanus lies around in damp molds and the aperture should not be opened unnecessarily, for minute as it may be, it will be found large enough to admit germs.

Often poultices are not beneficial. Bathing the foot in warm water that has boiled and then the application of an antiseptic is often all that is needed. Indeed, in most cases it is the best course of treatment.

Quite a number of troublesome foot cases have been ascribed to application of dirty poultices and rags, which, as soon as cleanliness and antiseptic treatment were adopted, began to heal.

When a poultice of bran and meal is used powdered charcoal and a few drops of pure carbolic acid should be mixed up in it before it is used. This will act then antiseptically and as a deodorizer.

In all these injuries attention must be directed to the floor and the ground around. All offal should be removed and the floor sprinkled daily with quicklime.—Baltimore Sun.

HORSE GOSSIP.

A bill to prevent ringing will be introduced in the New York Legislature during the present season.

Belle Vara, 2:08%, once owned at the Kalamazoo Stock Farm, has been retired to the stud, and is in foal to a son of Alcantara and Merry Clay.

W. B. Fasig, the Cleveland horseman, does not admire hobbles, and says of their use: "If we have been breed-

ing horses for 40 years and must still tie their legs together to make them go fast, we had better call it a failure and commence over again."

The old-time trotter, J. B. Thomas, 2:18½, died recently at Holly, Mich. He had been owned for many years by the famous showman, James A. Bailey, proprietor of the Barnum-Bailey circus.

A national convention of horsemen is being arranged to be held in March. The object of the meeting is to confer with foreign horse dealers and ascertain the particular types of horses in urgent demand for the export trade, and to encourage farmers and breeders to raise these special classes.

Among the rules adopted by the National Trotting Association at its last meeting is one requiring drivers to take out a license, except where an association confines its entries and drivers strictly to its own members. Licenses are to be issued free.

There is a feeling among those who have the best interests of the American light harness horse at heart, that betting on heats should be entirely abolished. It certainly gives the dishonest greater opportunities for fleecing the public, and unduly extends contests. Better stop heat betting and let the present distance remain undisturbed.

Sphinx, the great Michigan trotting sire, was sold at auction last week in New York. He brought only \$2,500, and went to an East Saginaw party. Sphinx has 54 in the list, is 15 years old, and ought to be good for 10 years yet. He was a very cheap horse at the price. The average for the 30 head owned by Sutherland & Benjamin was \$205.

Last week a choice coach horse was sold at auction to Ellis Bros., of Yorkshire, England, at the good price of \$725. He is a handsome black gelding, standing 16 hands, is 6 years old, and of very fine proportions. Another good horse, a bay driver, went to a French firm at \$375. Quite a number of choice animals sold between \$250 and \$300.

The "guideless wonders" are to have competition from an unexpected quarter the coming season. A young Pennsylvanian of Garrettsford has a yearling bull in training, which he has driven a mile in four minutes over a half-mile track, and has also trotted quarters in 55 seconds. His owner thinks him good for three minutes by spring, when he will be started on a campaign. The bull never breaks—at least hardly ever—but he may break his owner.

The Fasig sale at Madison Square Garden, New York, which had been in progress for some days, ended Friday night of last week. It is estimated that the total receipts from the sale amount to \$123,000. During the sale 467 horses were sold, the highest price being paid for Planet—\$6,000. A great many of the animals sold were taken for export to Europe. A number of European dealers were among the bidders.

At Chicago last week, receipts of horses showed a considerable increase, but business was fairly good, and the auction sales were well attended. Heavy horses are considerably below the high point of January, with nearly all the other grades fairly active at satisfactory prices. Margins are still small, and a reaction for the better is anticipated, as the trade is fast nearing the annual high point of the year. The domestic inquiry is improved over last week, and all grades are moderately active under the stimulus of larger orders from eastern sources. The volume of trade is considerably increased over last year, and prices are also higher, giving an encouraging outlook to the market for the near future.

The stewards of the Grand Trotting Circuit at a meeting held last week, admitted Buffalo and Portland, Me., to membership. The dates of meetings in the circuit, and the purses fixed for each, are as follows: Detroit, July 18, \$50,000; Cleveland, July 25, \$40,000; Columbus, August 2, \$30,000; Fort Wayne, August 9, \$25,000; Buffalo, August 16, \$30,000; Glens Falls, August 23, \$30,000; Readville, August 30, \$40,000; Hartford, September 5, \$40,000; Portland, September 12, \$35,000. Total purses, \$320,000. A resolution was adopted providing that hereafter purses in the circuit must be at least \$1,500, except in colt races for 2 and 3-year-olds. These latter must be worth \$1,000 at least. Next year, however, all colt races must be worth at least \$1,500.

Mr. Chas. F. Bates, of New York, who is a successful breeder of park horses, and thinks the American trotter can be used to advantage in producing this type of horse, says: "Nearly all of the trotting-bred park horses

which I have owned and exhibited were what might be termed short-bred on one side, or the other. Most of them were non-standard, or, if standard, they had a cold cross not far away in their pedigrees, so that I have come to believe from this experience that a dash of cold blood is a good thing. The high-bred trotting horse is likely to be too high toned in temperament, too rakish and narrow in conformation, with low, sweeping action, which will not do at all in a park horse. When you get outside of the best families of campaigners you will find shorter legs, bigger bodies, more substance and greater docility, as a rule, but in all families of trotters there are too many horses with ewe necks, coarse heads, long backs, light, flat-ribbed middle pieces loosely coupled, narrow, weak looking hind parts, drooping rumps, low set tails, crooked hind legs and shuffling gait."

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EVERGREEN STOCK FARM.—Black Percherons, French Draft and French Coach Stallions for sale. Special attention is called to our imported French Coach Stallions. Send for catalogue and descriptions. We also have carriage horses and draft horses for sale. Come early and make selections. THOMAS CROSS, Bangor, Mich.

JACK FOR SALE. Mammoth breed of Kentucky. For further information call on or address C. W. REDMAN, Owensville, Ind.

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CHESTER Whiteswine and Lincoln Sheep. Either sex and all ages for sale. Sows bred for spring farrow. Write A. H. WARREN, Ovid, Mich.

FOR SALE.—Large Poland-China sows, bred to Model Wilkes, Vol. 30, for Mich. and April farrow. Prices reasonable. F. M. PIGGOTT, Fowler, Mich.

MERCHANT KELLY, Woodstock, Mich., breeder of LARGE ENGLISH BERSHIRE SHIRES. Pairs not akin for sale cheap.

R. M. CROSS, Ovid, Mich., breeder of Victoria swine. Stock for sale. Breeding stock all selected. Reasonable prices. Correspondence solicited.

THE PLUM HILL HERD of large English Berkshire swine, B. P. Bock and S. P. Hamberg fowls. Stock and eggs for sale. C. M. BRAY, St. Johns, Mich.

POLAND-CHINAS.—10 sows bred for March and April farrow. Sept. boars must give place to the pig crop of '98. Shipping point Lansing or Grand Ledge. L. F. CONRAD, Wacousta, Mich.

SPECIAL SALE of 25 head of heavy-boned, choice Poland-Chinas. Spring and fall farrow. Stock always on hand. WM. L. PENNOCK, Hastings, Mich.

Duroc Jersey Hogs and Langshan Cockerels. Bred sows cheap. J. S. STONEBRAKER, El Paso, Ill.

DUROC JERSEYS. Choice stock of either sex all ages, for sale now. L. R. KUNLEY, Adrian, Mich.

LARGE ENGLISH BERSHIRE SWINE of the best strains for sale. Write for breeding and prices. C. H. FAITHORP & CO., Mt. Morris, Mich.

LARGE ENGLISH BERSHIRE SWINE, highly bred, from leading families. Write for prices. V. E. HACKNEY, Mt. Morris, Mich.

DUROC JERSEY SWINE. Spring and fall farrow for sale, both sexes. H. D. HALL, Marlin, Mich.

ONE-HALF of Village View Herd of P. C. swine, consisting of 11 brood sows, two boars and 16 fall pigs. I will sell cheap. It will pay any breeder or farmer to see me. J. C. TAYLOR, Grass Lake, Mich.

POLAND-CHINAS.—A few choice young boars. A grand lot of sows bred to the champion young boars "Chief Hidesetter" and "Wilkes Tecumseh." (Vol. 20, O. rec.) L. W. BARNES, Byron, Mich.

N. A. CLAPP WIXOM, MICH. BREEDER OF Large English Berkshire Swine. Write for prices.

GRAND RIVER HERD OF O. I. C.

JOHN BERNER, Prop., Grand Ledge, Mich. My stock comes direct from L. B. Silver Co. Write for prices.

FOR SALE. DUROC-JERSEY PIGS; B. P. R. Cockerels; Pekin Ducks. Eggs for hatching. J. H. BANGHART, Lansing, Mich.

FOR SALE from my great prize-winning herd of registered O. I. C. W. swine. Twelve extra fine boar pigs old enough for service. First man sending draft for \$12 gets the choice. G. S. BENJAMIN, Portland, Mich.

Hastings Stock and Poultry Farm, breeder and shipper of Poland-China swine, B. P. R. chicks. Write for bargains. WILLARD PERRY, Hastings, Mich.

Special Sale of Chester Whites at CASS VALLEY FARM. Lot of fall and spring pigs, dandies, at ¼ their value. Write to-day and secure a bargain. W. W. BALCH, Deford, Mich.

DON'T YOU WANT A P. C. SOW? COCKEREL? Hickory Grove has some great bargains. Also spring boars and fall pigs. A. A. WOOD, Saline, Mich.

PRINCE U. S. heads my herd of Poland-Chinas; he by Corwin King 1870; dam by Quality 12457. Sows bred, for sale, fall pigs of Kievers' Model, Tecumseh and Black U. S. strains. Also Light Brahma chicks. E. D. BISHOP, Woodbury, Mich.

First Premium Herd of Poland-Chinas. Sows to King Kievers for sale. Also some fall pigs. We won over one-third of the premiums offered at Mich. State Fair in '97, winning all the firsts on pigs, 8 herds competing. E. J. L. HARRINGTON, Paw Paw, Mich.

KLEVER'S TECUMSEH heads my herd of Poland-Chinas; weight 200 lbs. at six months, extra length and great depth. Sired by the \$5,100 Klever's Model, dam by the great Chief Tecumseh 2nd. Write your wants. WM. H. COOK, Waterford, Mich.

W. O. WILSON, Okemos, Mich., proprietor of the Michigan Central herd of IMPROVED CHESTER WHITES. Choice pigs of March and April farrow, either sex and pairs not akin. Write me just what you want. Light Brahma cockerels at \$1 each.

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SAMPLES OF WOOL.

Mr. John Marshall, of Cass City, sends us some samples of wool from his flock of Leicester. There are four samples in all, ranging in length from 5½ to 8½ inches. It may be the latter has got stretched some in separating it from the other samples. The samples are very fine indeed, the fibre elastic and lustrous, with a greyish tinge pervading them, which is a natural characteristic of the breed since the days of Bakewell. The elasticity of the fibre will be appreciated when we state that one measuring 6½ inches can be stretched readily to nine inches. There are very few Leicesters in the State, and we are pleased to see that Mr. Marshall evidently has a flock of fine breeding, and carrying such handsome fleeces.

S. D. Thompson, of Holton, writes: "I herewith inclose two samples of wool from fleeces clipped off wether lambs January 25, 1898. Sample No. 1 from fleece weighing 7 lbs. 4 oz.; sample No. 2 from fleece weighing 7 lbs. 12 oz., and of about ten months' growth. What would such wool grade? How do you think it would suit our American manufacturers? These lambs are from common coarse wool ewes sired by a full-blood Rambouillet ram. They have been feeding since November 24, 1897; before that time they had only pasture, and owing to the drought, that was not very good."

The samples referred to have a length of staple of 3½ and 3¾ inches respectively. The wools are very light, the amount of oil carried being much less than we would expect from the breeding of the sheep. The heaviest fleece is the best, as it has a fine crimp for half-blood wool, and shows more of the Merino characteristics. They are the first samples we ever saw from sheep bred in the manner described by our correspondent. The only ground for criticism of the samples is that fully a quarter of an inch of the heaviest sample is greatly weakened in fibre from exposure. The oil has been washed out, and the fibre has become more or less matted and rotted in consequence. But that is a matter of management, not of breeding. Another cross of a heavy fleeced Rambouillet or American Merino ram would add to the quality of the fleeces. It is, however, a very desirable style of wool for the manufacturer, and in prime condition would grade half-blood combing, which is quoted at 22¢ per lb. for unwashed in the Boston market.

For the Michigan Farmer.
THINKS AGRICOLA IS WRONG.

Under head of "Sheep and Wool," in issue of January 29, 1898, is an article written by a gentleman styling his name as "Agricola," in regard to Cotswold sheep being the best and only sheep for the small tenant farmer and that there has not been any royal princes or dukes to introduce their fashionable points or to attract public favor by their patronage and support. He says in substance that if they had been in the hands of such noblemen they would have brought a much higher price than they do—and that might be true. When I was in England in the spring of 1894, in search of some good sheep, I visited some of the Cotswold breeders and found I could buy good Cotswold lambs at \$40 each, while I had to pay \$100 for Lincoln lambs three months old; and the different Down breeds also brought a higher price than the Cotswolds in their shires in England. By the tone of "Agricola's" article he must be a breeder of Cotswolds, but he can never bring them to the front by trying to tear down other breeds, as there is plenty of room for all. He tries to deal the heaviest blow at the Lincolns, as he says some Cotswold breeders took it into their heads to change their flocks of Cotswolds for Lincolns, and then changed back. He says they probably changed for heavier fleeces of wool. That is a good point which he understands very well, and if he had added that Lincolns have shorter legs, and round ribs, and are well meated down on the hock, and have a finer staple of wool, he would have made another good point. He says the Cotswolds have not been shown extensively at the agricultural exhibitions, but I think the different breeds of sheep

have had a fair representation at all our agricultural societies, in this State at least.

I would also like to give a word of warning to the average farmer, that whatever particular breed of sheep he should wish to purchase, do not buy the so-called "fitted" sheep of any breed for breeding purposes, as their stomachs are more or less burnt out by the use of the so-called patent foods. They will not give satisfaction to the breeder. Some judges go a great deal on the flabby, fattened animals but they are rarely good for breeding purposes.

J. J. ENGLAND.

Tuscola County, Mich.

GOOD WORDS FOR AMERICAN WOOL-GROWERS.

Mr. George H. Wallace, of New Mexico, once United States consul at Sydney, Australia, in a paper read by him at the National Stock Growers' convention at Denver, said:

"No sheep breeders in the world have equaled the American in the production of density of fleece, which is fineness of fiber. Prof. McMurray, of the University of Illinois, in his exhaustive report on 'Wool and Other Fibers,' proves beyond the possibility of question that he found 29,000 on a square inch of an American sheep, while the highest number found on the finest Australian Merino was but between 22,000 and 23,000.

"Nor has the American been excelled in the production of fleeces with good constitutions, showing a uniformity in size and form, possessing fleeces of great density and fineness, with a long staple of great length and elasticity, with regular crimp and a gloss of sheen, bright and showy.

"For fifty years they have been producing sheep the equal of those grown anywhere in the world. More than that, for thirty years our readers have been exporting breeding sheep to every wool-growing country, for the improvement of the flocks of those countries. The American Merino is now a fixed type, with its markings so peculiar to itself, and they are so prepotent in breeding that a fractional cross of American blood is easily detected by breeders.

"At an international exhibition held in Vienna in the early fifties the prize for the finest samples of Merino wool went to the State of Tennessee in the United States.

"In 1851 at the World's Exhibition in London, four prize medals were awarded to American sheep, and at the international exhibitions of 1863, at Hamburg, where all of the finest flocks of Europe were represented, the two first class prizes were awarded to Merino sheep from Vermont.

"It is the current popular opinion that English and Australian wool surpasses American in quality, but the reverse is true. For more than thirty years the Australians have been annually importing American sheep by the carload, as breeders, to secure fineness of fiber and density of fleece. The characteristic of Australian clips which has produced this impression is uniformity, and this uniformity is secured by the size of their flocks in all goods where soft and fleecy finish is required. American wools excel those of the rest of the world.

"The many different kinds and breeds of sheep may be divided into two classes: those kept for the wool they produce, with the carcass as an incidental, and those which are bred for the mutton qualities, with the fleece as the incidental. It is now and has been for years the study and aim of the enthusiastic breeder to produce an animal which shall be a combination of these classes, but while we are nearer that point than ever before, we are yet far from complete success. The character of the soil and food obtained therefrom have much to do with the development of the animal. The mutton breeds, as the Cotswolds, and the Downs, like damp climate, soft food and level ground; while the Merino prefers and

thrives best on a stony soil, in a hilly country and a drier atmosphere.

"The effects of acclimatization are not yet fully considered nor understood. While the animal may live and appear to thrive the altered conditions of life will certainly be felt. It has been often noted that the constant cold in the high plateaus of the Cordilleras clothes the pig with a downy fleece, and the action of the heat in the valley of the Madeline substitutes a coat of shining hair for the sheep's fleece of wool. In those sections of the United States where the sheep have been the longest acclimated we may see the effects of different climates and various foods and modes of life. In Vermont and other northern portions the carcass is small, the wool dense, and the general appearance of the sheep is stocky and compact. In Missouri and Kansas the frame is larger, the staple as a rule longer, the wool not so dense. In Texas and New Mexico the frame increases in size, the wool is quite long in staple, strong in character, and becomes very open.

"The growth of wool in the West and the development of the industry since 1860 in the Argentine, Cape of Good Hope and Australia made wool growing east of the Mississippi unprofitable, and the building of manufacturing centers and large cities in that section made a ready market for mutton sheep, which took the place of the Merinos that were sold in the West. The locality of both branches of the sheep industry has been thus established by the inexorable force of circumstances.

"What its future will be, who can tell. Let us hope the industry will live and prosper."

FLOCKS AND FLEECES.

Australians have established a regular trade in frozen mutton with South Africa, and the demand is steadily improving.

The lambs from Fort Collins, Colorado, are not selling as well this year as usual, but this may be because the first shipments were not quite up to the mark.

The Lincoln sheep competing for Association prizes at the State Fair must be bred by the exhibitor. These prizes are intended to encourage good breeding, not the purchase of show sheep simply to carry off prizes.

A correspondent inquires what causes sheep to pull their wool? Any disease of skin, or the presence of parasites that cause itching, will make sheep pull their wool. Look your sheep over and see if they have ticks or lice. If not, see if the skin looks healthy. Mix a little sulphur with their salt, say three pounds of sulphur to five of salt, give your sheep and lambs free access to the mixture, and keep them housed while feeding it, as the sulphur opens the pores of the skin and renders them liable to catch cold if exposed to snow or rain, or cold winds.

At the annual meeting of the Vermont Merino Sheep-Breeders' Association, held February 2, the following officers were elected for the ensuing year: President, C. E. Abell, of Orwell; Vice-Presidents, J. J. Crane, of Bridport, and C. M. Remel, of Middlebury; Secretary, Lewis A. Skiff, of Middlebury; Treasurer, F. H. Farrington, of Brandon; Directors, Cyrus H. Smith and Byron Smith, of Addison; Ira L. Hamblin, of Cornwall, and C. A. Chapman, of Ferrisburg; Committee on Pedigrees, E. N. Bissell, of East Shoreham; C. P. Crane, of Bridport, and J. T. Stickney, of Shoreham. Vermont breeders are greatly encouraged by the present outlook.

J. S. Beecher, of New York State, in discussing the type of Merino to breed, before the Standard American Merino Association, said: "I advocate the wrinkly, dense-fleeced, well-covered, vigorous, large-carcased, heavy-fleeced, up-to-date Merino, because they represent the improved type of the American Merino that holds and maintains its fleece qualities when well in years,

and because experience has demonstrated that this type is best of all as an improver of lower grades of sheep. This is an established fact in our own country, and holds equally so in Australia, the Transvaal and Argentina. * * * Whatever others may do, so long as I breed the American Merino, I will strive to produce this type.

The annual meeting of the Black Top Spanish Merino Sheep-Breeders' Association was held at Washington, Pa., recently, and the following officers elected: President, J. M. Barry; Secretary, R. B. Berry; Treasurer, C. M. Berry; Board of Directors, R. K. Scott, W. F. Whitham, W. J. Smith, S. W. Berry, S. C. Herdman, J. P. Chambers, and the President. "The following resolution was unanimously adopted: Resolved, That we, the members of the Black Top Spanish Merino Sheep-Breeders' Publishing Association concur with other sheep-breeders' associations in asking fair boards to require all sheep exhibited for premiums to be registered in some recognized published register, and that exhibitors be required to show all necessary papers to establish this fact."

When writing to advertisers please mention Michigan Farmer.



BREEDERS' DIRECTORY.

CATTLE.

CLOVER BLOSSOM FARM ABERDEEN-ANGUS CATTLE. Kinde, Mich. 10 choice bred bulls for sale. Largest herd in Michigan. JAS. H. HALL.

J. F. & E. W. ENGLISH, Clarksville, Mich., breeders of registered RED POLLED CATTLE. Olney and Sultan head the herd.

M. CHASE, Muir, Mich., breeder of Red J. Polled Cattle and Poland-China swine. Choice young stock for sale. Prices right.

SHORTHORNS and POLLED DUSHAMS. Four young bulls for sale. Correspondence solicited. M. B. FREEMAN & SON, Flushing, Mich.

A LARGE and extra fine pure-bred Holstein bull calf, 2 weeks old, from one of my very best cows, whose dam was one of my first prize winners at the "World's Fair," Chicago, 1893. "The bull is half the herd." Price reasonable. B. F. THOMPSON, Detroit, Mich.

FOR SALE. The Shorthorn three-year-old Peri Duke 10th, 130479. Red, little white; long and deep. A grand good getter of the finest quality. He has given us fifty calves without a loss. We sell only because his helpers are maturing. He has never been fed for the show ring, but is a prize winner every time exhibited. Weight about 2,300 lbs. in present working condition. Perfectly gentle and transmits his mild disposition. He is sure to improve any herd that secures him. Two yearlings and a few bull calves. THE A. P. COOK CO. Ltd., Brooklyn, Mich.

SHEEP.

PURE Bred Hampshire Ewes from imp. stock at a bargain for the next 30 days. Inspection invited. J. H. TARR, Mendon, St. Joe Co., Mich.

REGISTERED RAMS AND EWES FOR SALE at Rambouillet, U. S. A. THOS. WYCKOFF, importer and breeder, Orchard Lake, Mich.

SHROPSHIRE HALL STOCK FARM.—Special prices on 75 choice registered ewes, all bred to imported rams and 30 choice ewe lambs, to make room for this season's second importation, to arrive in January. Also a few choice Polands and Berkshire sows and boars. State agent for the Black Diamond Sheep Dip, the best dip on the market to-day. I have tried them all. L. S. DUNHAM, Concord, Mich.

SHROP. EWES bred to high class rams. Better than Klondyke gold. Write at once for price list. A. H. FOSTER, Allegan, Mich.

DOGS FOR SALE.—Sporting and Pet Dogs. Pigeons, Rabbits and Hares. 10c. for catalogue. C. L. B. LANDIS, Bower's Station, Berks Co., Pa.



Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to
KENYON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - MICH.

News from Michigan Granges is especially solicited.

GRANGE NEWS.

TO CORRESPONDENTS.

(1) We want to hear from each Grange in Michigan at least once each month, oftener if possible.

(2) We want news about your Grange which will show your progress and work.

(3) We want the ideas, opinions and conclusions of your members on all of the important questions discussed.

(4) Boil it down.

(5) Mail at latest by Saturday noon, to insure insertion the following week.

WORKING GRANGE, No. 509, was represented at Michigan State Round-up Farmers' Institute, by Bro. and Sister J. Saxon.

Lenawee County. MARY W. BETTIS.
ROCKFORD GRANGE, No. 110,
Feb. 12, two took first degree; six applications. Had a Lincoln Day program. Feb. 26 will have Washington Day program.

Kent Co. E. R. KEECH.
CADMUS GRANGE
is booming. Feb. 12, fifteen were given first two degrees. A social Feb. 9 brought in \$9.50. We are to have a traveling library for another year.

Lenawee Co. DECKIE TOBIAS.
DANBY GRANGE
had a Washington program Feb. 16; had several visitors from Portland Grange. The Grange voted to pay \$50 on the hall.

Ionia Co. T. C. PRYER.
FELTS GRANGE, No. 347.
We meet every two weeks, usually with good attendance, having almost always a good program in addition to the regular business meeting.

Ingham Co. MRS. J. W. POTTER.
GRATTAN GRANGE
Bro. and Sister Saunders, of Courtland Grange, installed our officers, and reported from State Grange. Oyster supper followed.

Kent Co. C. D. R.
WEST HANDY GRANGE, No. 613,
had a special meeting Feb. 16. Forty were present. Fourth degree was conferred on eight; ceremony followed by a feast.

Livingston Co. MRS. H. CHENEY.
HARBOR SPRINGS GRANGE, No. 730,
held a special meeting January 29; discussed the postal savings bank system and passed a resolution unanimously in favor of the plan.

Emmet Co. MRS. A. COOK.
ENSLEY CENTER GRANGE, No. 544,
meets first and last Saturdays in each month. It is in good condition. We have many young people. Two members have just joined.

Newaygo County. MINNIE HOLMES.
FLAT ROCK GRANGE, No. 636,
met at Bro. Henry Wagar's the evening of Feb. 3; subject for discussion was "Free rural mail delivery." All were in favor of it. The 16th was application night.

Wayne Co. W. J. C.
ESSEX GRANGE, No. 439,
met Feb. 10. Notwithstanding bad roads there was a good attendance. Five members elected. Seven ready for initiation. Increasing interest manifested by all.

Clinton Co. M. S. MOSS.
LIME CREEK GRANGE, No. 712.
Feb. 11, owing to the bad roads, the attendance was small. L. W. Gallup gave a paper on "Diversified farming." He considered that for this part of the country it is the best.

Lenawee Co. COR.
CHICKAMING GRANGE, No. 382,
Feb. 12 had good attendance. Discussed "Postal savings banks." Decided it would be a good thing for rural districts. Bro. A. L. Drew gave a very interesting account of the large farmers' institute at Berrien Springs.

Berrien Co. MARY H. CLARK.
NEWBERG CENTER GRANGE, No. 605,
at last meeting discussed "Why should we read?" The general expression was, "In order that we may inform ourselves and fit us better for society." Worthy Master Horton, of the State Grange, recently lectured at our hall.

Cass County. ELLEN D. RUMSEY.
ALLENDALE GRANGE, No. 421,
is once more on her feet with a new set of officers, and a good strong showing for the near future. Master is D. H. Cheeseman. We meet every two weeks in the afternoon. Have

twenty members, with three candidates.

Ottawa County. COR.
BUTLER GRANGE, No. 88.
Feb. 15, six took third and fourth degrees; feast followed. Grange is in prosperous condition and attendance increasing. Branch county Pomona met with Girard Grange Feb. 17; good program.

Branch County. M. L. ROSSMAN.
SILVER LAKE GRANGE
had a fair attendance on the 19th. We shall soon give an entertainment and the Sisters will use the proceeds to purchase kitchen supplies for the Grange.

Grand Traverse Co. MRS. R. DAVIS.
ADAMS GRANGE, No. 286.
Feb. 1 we had open Grange, but on account of the roads the attendance was poor. Bro. Rockwood talked on street railways, making an interesting address. Bro. Huff talked on lamb feeding.

Hillsdale County. FLORENCE HUFF.
PORTLAND GRANGE, No. 174.
Feb. 18, four were given the third and fourth degrees; fifteen were voted upon, with two applications. We are so busy with initiating that program suffers. Had a brief Washington program last meeting.

Ionia County. GEO. W. PEAK.
AZALIA GRANGE.
A new Grange has been organized at Azalia, Monroe county. Master, James Knowles; lecturer, R. Ingraham; secretary, Mrs. J. Knowles. Fifty names on enrollment paper. Charter will be closed at the next meeting, Friday, March 4, at 1:30 p. m.

E. A. C.
JOHNSTOWN GRANGE, No. 127.
At the last meeting officers were installed by Sister Naomi Slawson. The master is H. M. Bristol; lecturer, Etta Beach; secretary, Geo. R. Bowser. County Grange is to meet with us. Our next meeting is application night, and we are expecting a large list.

Barry Co. GEO. R. BOWSER.
MADISON GRANGE.
Commissioner of Schools Hensel, of Lenawee county, has decided to hold a one-day institute at Madison Grange hall, Saturday, March 12, with program of value to all interested in education. Picnic dinner; coffee furnished free by the Grange. Everybody in the county invited.

Lenawee County. E. W. ALLIS.
ARCADA GRANGE, No. 500.
Have just held the first meeting for six weeks on account of storm. Discussed "Shall we protect the rabbit?" Unanimously decided that no protection is needed. Bro. Shaner talked on the aims and purposes of a special meeting of the supervisors held at Lansing, Feb. 1.

Gratiot County. A. L. KNAPP.
ALUMINA GRANGE, No. 555.
Feb. 12 the good roads question was discussed, but not completed. The opinion seemed to favor money tax rather than labor. We are negotiating for a traveling library. The Grange is holding socials weekly at the homes of different members, and inviting everybody to a picnic dinner, which is followed by a program by the young people. The socials are very enjoyable and beneficial.

Muskegon County. MRS. DELL VIETS.
ASHLAND GRANGE, No. 545,
Feb. 12 discussed "Hawaii." Also had a Lincoln program, with quotations from Lincoln, and discussion on the life of Lincoln. At the next meeting we shall have a Washington program and a feast. Have invited Trent Grange to meet with us at that time. We meet every other Saturday evening.

Newaygo Co. MINNIE A. BRINK.
NORTH BRANCH GRANGE, No. 607,
met February 12. Attendance, 50. Initiated fourteen in the third and fourth degrees. The ladies furnished a lunch. The contest program was then carried out with good order and lots of fun. The county deputy lecturer is doing good work in our adjoining town, trying to get a Grange organized. Let's help him.

Lapeer County. H. S. BRADSHAW.
GANGES GRANGE, No. 339,
is booming. Feb. 10, officers were installed and five candidates initiated. Thirteen applications are before the Grange in various stages of progress. Voted to hold all-day meetings until April 1. We shall begin at 10:30 a. m., all bringing lunch baskets. William H. Dunn was elected critic, and it is now expected that parliamentary rules will be closely observed.

Allegan County. COR.
WINDSOR GRANGE, No. 619,
We installed as officers Jan. 7: Master, N. P. Hull; overseer, C. Mathews; lecturer, Miss Mary Van Auker; secretary, Miss Nellie Skinner. We also

decided to have a contest between the ladies and the gentlemen, the defeated party to furnish supper.

Seven applications for membership were received at our last meeting. We have contracted for one of the travelling libraries.

Eaton Co. A. J.
SHERWOOD GRANGE, No. 96.
Officers were installed by Bro. and Sister D. D. Buell. After supper report of State Grange was read by Sister Locke. Officers are, Master, C. Leatherberry, Jr.; overseer, C. Leatherberry, Sr.; secretary, I. R. Lake; lecturer, Mrs. J. M. Locke. Financially, Grange is prosperous. At our next meeting will discuss postal savings banks. Are arranging for a public meeting in the near future. Membership gradually increasing.

Branch County. A. P. L.
ALBA GRANGE, No. 716.
Feb. 15, attendance small on account of bad weather. Sister M. J. Olds gave an account of her visit to the School for the Blind at Lansing, and Bro. C. E. Mills told of a visit to the School for Deaf and Dumb at Flint. Bro. E. E. Mills urged members to benefit by co-operation more than they do, and as a start in that direction suggested that we club together in sending for seeds.

Antrim County. COR.
NEWARK GRANGE, No. 514,
Feb. 12 received two new members by demit. Began a contest. The carpet social netted \$10.

Gratiot County. R. J. KNOWLTON.
MONTGOMERY GRANGE, No. 49.
At last session we discussed the articles which are going the rounds of the newspapers, stating that Gov. Pingree used objectionable language at the capitol. Those of our members who ought to know, say it is a false statement.

Kalamazoo County. COR.
PENINSULA GRANGE, No. 663,
met Saturday, Jan. 29. Regardless of bad roads, the attendance was very good, and our meeting was very interesting.

Two good talks on Worthy Master G. B. Horton's address were given.

We are going to have a lyceum for our young people in connection with the Grange. The young folks must first join the Grange, and they will have the privilege, the evening after each Grange meeting, of having a lyceum at our hall.

Grand Traverse Co. L. DANA.
WHITE OAK GRANGE, No. 241,
has a good membership, and a well furnished hall of our own. We meet every Saturday evening. Feb. 10 and 11 Ingham Pomona Grange met with us; the first evening we elected officers of Pomona. Friday was open meeting and after about 100 Patrons and friends had partaken of a bounteous dinner, Pomona officers were installed by Bro. E. A. Holden, of Capitol Grange. On the program we discussed "Free rural mail delivery" and "Postal savings banks." We are in favor of both.

Ingham Co. MAE HASTINGS.
ALPINE GRANGE, No. 348,
Feb. 5 discussed "Election of United States senators and president by popular vote," "Licensing country peddlers" and "The right of any citizen not a taxpayer to vote on a direct question of raising money." It was the general opinion of the Grange that United States senators and the president should be elected by popular vote; that no license should be required of country peddlers; and that no one but taxpayers should vote on questions of raising money.

Kent Co. MRS. W. E. CHAMBERS.
LICKLY'S CORNERS GRANGE, No. 274,
has a membership of thirty at present, meeting on the second and fourth Fridays of each month in the evening. There seems to be some lack of interest on the part of members, though the leading officers are generally present. Have organized a choir, but have no singing in the Grange. The new officers have not yet been installed, and through the negligence of delegates to State Grange we have not yet received the annual word. A new Grange organized near by has crippled us considerably, but we mean to live just the same, and I hope before long to give a more encouraging report.

Hillsdale Co. ADELBERT WARD.
FROM BARRY COUNTY.

Our Granges took deep interest in the Barry County Farmers' Institute, which was held at Delton, Jan. 28 and 29. The meeting was a success from start to finish, and there is no doubt that next year's institute will be looked forward to with much interest. Barry county farmers have caught the idea of a better understanding of their vocation. We would favor quarterly

meetings of the institute, avoiding so far as possible the busy season, or making the county Grange a quarterly meeting, so that all who desire might be admitted to the debates and discussion of all subjects relating to the farm.

Barry Co. GEO. R. BOWSER.
FRUIT RIDGE GRANGE, No. 276,
gave second degree to 20 at last meeting. In discussing "The young people and the Grange," the conclusion was that the Grange affords better opportunities for the mental development of the young people of the farm than they could obtain elsewhere in the rural districts.

"The Grange and the surrounding community" was next discussed. It was stated that the Grange is a blessing to every community for it tends to inspire the people with higher ambition for neatness and taste about their farms. It has almost become the imperative duty of farmers to belong to some farmers' organization, and it is generally conceded that they can receive the most benefit from the Grange.

Lenawee Co. J. W. A.
CAPITOL GRANGE, No. 540.
Saturday evening, February 12, the first entertainment of the new contest was presented by the members of the "Southwest quarter." If the remaining sections come up to the attainments of the southwest quarter they will have to work. The farce, "Aunt Betsy's Beaux," was particularly good and well acted. A Lincoln program was also rendered.

Saturday evening, February 19, the "Southeast quarter" gave us the second program. Several original songs were sung and poems read, which reflected credit upon the writers. If the remaining sections give us as good programs as those we have already had, we feel the matter of deciding who is to furnish the banner will be a rather difficult task.

A special agent will be appointed this week to secure subscriptions for The Farmer.

Ingham County. BLANCHE McCLURE.
PENNFIELD GRANGE, No. 85.

"What shall we read?" was discussed with interest at our last meeting. Sister Garrett thought that our traveling library contains many good and useful books. Sister Meade thinks that our characters are molded more by what we read than through our associates. "Future of Michigan," was next discussed. Bro. Poorman thinks farms will be smaller and more thoroughly tilled. Other brothers advanced the idea that Michigan's future will, to a great extent, be influenced by dairy farming with modern appliances, which will prove especially successful when skillfully conducted in winter. Bro. Lee and others spoke on free rural mail delivery, and thought farmers were entitled to it. Our meetings are very interesting and instructive, and we only wish more of our friends and neighbors would avail themselves of the privileges afforded.

Calhoun County. MRS. E. J. SMITH.
KALKASKA GRANGE, No. 697,
met with Bro. and Sister Ecklers. At the last meeting Bro. Barnard thought that one way to build up the Grange is to interest those outside by proving to them that the Grange is of use to each member, and second, by purchasing as a Grange. Would patronize home merchants when possible; when they are not reasonable, purchase elsewhere. The Grange should always be posted on current prices.

Master thought a good way to build up the Grange is for us to work in harmony and unity, trust each other, and to prove by our acts that we desire the welfare of all Patrons. This is important, because farmers seem to trust each other less than do other classes of men.

The lecturer said that as Patrons we are watched by those outside to see if it pays to belong to the Grange. Hence we must constantly strive to do work that will attract the interest of those outside.

Kalamazoo Co. H. A. BARNARD.
BATTLE CREEK GRANGE, No. 66,
met Feb. 3 at the home of Sister Adams. Four applications. The present system of caring for the county poor was discussed, and though all considered it unjust and expensive, no better plan was suggested.

A social was held Feb. 4 at the home of Bro. Fuller. Each lady came provided with two ribbons, one of which she wore, the other being enclosed in an envelope. The envelopes were drawn by the gentlemen, who were allowed to choose between paying a quarter for the same and being weighed.

ed, paying the difference in weight between himself and the lady at the rate of one cent per pound. The majority proved to be of a conservative turn of mind in this respect. Conversation cards proved useful in promoting sociability. Topics for conversation were written on slips of paper; each gentleman must find the mate to his slip, and converse on that topic with the lady holding it.

LILLIAN ADAMS.
Calhoun Co.
FROM CASS COUNTY.

The master of the State Grange, Geo. B. Horton, has been making a trip through Cass County. The evening of Feb. 7 he addressed a well-filled house at Corey, showing to them clearly that the Grange is the ideal farmers' organization. The next evening, although it was stormy, he addressed a good gathering at Norton's schoolhouse. From these we went to Volinia town hall, where we met Bro. Wm. R. Kirby, who entertained us. We found him a progressive Patron. In the afternoon, at Grange hall, Bro. Horton addressed the farmers of the township. In the evening Bro. Horton spoke at Wakelee. We found the people there somewhat discouraged, but before we bade them good-bye the sun was shining, figuratively speaking. Thursday evening we met with Newberg Center Grange, where everybody seemed happy and satisfied. Friday evening we met with Porter Grange. There is to be a new Grange here known as No. 427. Worthy Master Horton gave them a fine address, and instructed them in the unwritten work.

This completed the course of seven lectures, and although it rained nearly every day, and the roads were very bad, Bro. Horton left the Grange in Cass County much better for his visit.

J. D. MANN.

KENT POMONA PROGRAM.

Kent Pomona will hold its next meeting with Sparta Grange Wednesday and Thursday, March 2 and 3. Following is a brief outline of the program: Wednesday afternoon, public session. After dinner, meeting will be called promptly at 1 o'clock. Bro. E. S. Dart will give the greeting and Bro. J. H. Martin will respond. The following subjects will be presented for discussion: "Is the present State Institute management satisfactory to the farmers of Michigan?" "The relation of the school to the home," "Would it be for the best interest of all to form a Patrons' and Teachers' Association in Kent county?" Wednesday evening at 7:30 we will discuss "Farmers' Mutual Fire Insurance Companies, and how can they be improved?" Question box on general topics. Fifth degree will be conferred.

Thursday, at 9:00 a. m., will have business meeting, followed by a lecturers' conference. I hope that the lecturer of every Grange in the county will be present and prepared to take part in this conference. Discussion will be had on "Farming and its outlook," and "Should fresh air work be encouraged in the Grange?" I want to get the opinion of every sister on the last topic.

During open session Wednesday evening the county school commissioner will address us in behalf of Patrons and Teachers' Association. The general public is invited to this session.

At all the sessions good music and recitations will intersperse the program. I want to urge all Patrons to turn out liberally to this Pomona. Remember that the people of Sparta are hospitable. Bring along your Grange Melodies.

MRS. FRANK SAUNDERS, Lecturer.

CALHOUN POMONA

met with Pennfield Grange Feb. 10. Bro. McDermid gave an outline of the work of the past year, which has been good in the main, but we may improve by being more thorough. Some do not dig deep enough, but spoil subjects for further use by superficial handling.

"How to be rich without money" was the subject of a paper by Sister Poorman. The writer quoted three essentials from our ritual—faith, hope and charity, adding contentment, and, the most important of all, the Christian religion, believing with Patrick Henry, "If they have it not, no money can make them rich."

Bro. McDermid quoted the saying, "The opinion the Lord had of riches might be inferred from the class of people to whom he gave them." He also mentioned that in the library of the late Mr. Pullman, the furnishings were valued at \$17,000 and the books at \$250.

Sister Ewer thought happiness is wealth and consists in adapting ourselves perfectly to our surroundings.

Two sisters compared notes and found themselves equally wealthy in the possession of large families with correspondingly small means.

"What inducements does the farm hold out to young people?" was responded to by Bro. Frank Minges. To succeed in farming a young man must like his occupation, have perseverance and take pride in good work. He must possess sound business judgment to a much greater degree than is necessary in many other occupations. No safer investment can be made than a good farm, there being less danger of loss in hard times or in case of sickness. It offers a greater variety of work, and a day's vacation can generally be obtained when needed. The farm is the best place to bring up a family and to teach children the necessity for regular work. If boys and girls are to be sent from the farm to city schools, the brother considers the public schools better than the business college, the training in expression gained in the former being of much value. If boys show no liking for the farm, give them a chance to do something else by all means. Bro. Garret quoted from Carlyle, "Blessed be he who has found his work."

Bro. Chidester talked on "Winter work in the orchard." Pruning must be done sometime during the winter and this is also the time to study for the spring work. When large branches must be cut from trees, he advised painting with red lead to prevent loss of vitality. For the apple scab, spray thoroughly with Bordeaux mixture just before leaves start. To catch the peach borer, he recommended mounding the trees late in the fall, not removing until June, when the borers are very easily killed. He considered the injury to the apple crop last year to have resulted largely from the trees being exhausted by previous excessive bearing. One brother advised the use of a common grain rake to thin the fruit.

"How to get a good catch of clover on sandy knolls" was discussed by several. Use a top-dressing in the fall, worked in before sowing wheat. On sandy land, harrow the seed in. Bro. Brown advised the use of the weeder after sowing.

Sister Woodworth presented a paper on "The bright side of life." Life seems very bright to us when everything goes well, but in adversity nothing but a firm faith can carry us through. We cannot judge of other lives by appearances.

Mr. Merritt, of Battle Creek, being present, the sugar beet question was given some attention, as the possibility of starting a factory there is being considered. Bro. McDermid, with others, believed in going slow, making no promises until satisfied, but thought the subject an important one. We pay one hundred millions annually for sugar; here is a chance for a large saving. We should avail ourselves of every opportunity for investigation, as we cannot get too much information.

LILLIAN ADAMS, Cor.

POINTERS FOR LECTURERS.

I thought that some of the subjects given at our Farmers' Institute at Adrian would be of value to Grange Lecturers: "What can the experiment station do for the farmers?" "What should be the main object in life; or what should we live for?" "What makes a happy home?" "Will the establishment of postal savings banks affect the farmers' interests, and how?" "In what respects can farmers profitably practice economy in feeding dairy stock?" "Equitable taxation." "The question of transportation as it affects the interests of agriculture." "Art in the home." "Along what lines should farmers work for the advancement of their interests, and what means may be employed for the promotion of such work?" "Pure food legislation as it affects producer and consumer." "The new woman as connected with the practical and business affairs of life." "Inasmuch as the general interests of farmers are practically the same, would it not be for their welfare to act together in politics?" "Wards of the Industrial Home as domestics in farm families." "What improvement can be made in the collection and distribution of crop statistics for a more direct benefit to farmers?" "Is the distribution of seeds by the general government of sufficient benefit to agriculture to warrant the expense and continuance of the system?" "What results should be considered in the estimate of successful farming?"

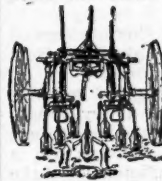
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E. W. A.

Edward J. Doyle's Big Strike.

Edward J. Doyle, who recently gave up his position as foreman of the printing office, has gone out, without previous experience, into the state and we hear, on good authority, is making \$10.00 to \$25.00 every day, giving public entertainments with the New Gem Talking Machine Outfit. The complete outfit including the Talking Machine, Records, Show Bill Posters, Tickets, Dates and all was sent to him C. O. D. \$22.25. He recently sent his assistant South with the new Klondike Picture Panorama and Lecture Outfit which he bought complete for \$58.75 and this is doing even better than the Talking Machine entertainment. He now has an entirely new Moving Living Picture Entertainment outfit ready, which cost him complete just \$105.00, and he expects to start it in another direction shortly. Mr. Doyle certainly stepped at once from a mechanic's position to a quick road to fortune by taking advantage of the new inventions of the day, and his success proves there is money in the country and the people are interested in these new wonder inventions. Why don't the thousands of our young men, now out of employment, have a little more enterprise and thus carve their own way to fortune. Sears, Roebuck & Co., Chicago, furnish any of these outfits to anyone on examination before paying, and send the most complete catalogue on the subject free on application, if you will name the catalogue you want.

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T. B. JOHNSON.

DAVENPORT, IOWA, July 17, 1897.

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JESSIE ARMIL.

BLOOMING PRAIRIE, MINN., July 15, 1897.

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Miscellaneous.

THE NORTH WALK MYSTERY.

BY WILL N. HARBEN.

[Copyright 1897, by Will N. Harben.]
(Continued.)

The last letter went out with a bright flash, giving Lampkin a vague view of the large room and the Benton party about 20 feet in front of him. The next instant the room was totally dark. It remained so for two or three minutes. Then the flute note sounded again, and a large square of light appeared ahead of them. It looked as if it were half a mile from where the spectators sat. Slowly it began to take the form of the interior of a room. The walls, pictures and curtains came into view, and then the furniture, a desk, a man sitting at it.

Alice Benton stifled a scream. It was her father. He sat writing. He leaned forward and dipped his pen in the inkstand. The spectators saw the movement of his hand over the paper and heard the scratching of his pen. He turned his head, looked at them and then rose deliberately, laid his left hand on his breast and pointed steadily at them. His lips moved, but no sound passed through them. Then Dr. Lampkin heard some one gasping for breath and a heavy weight fall to the floor. Instantly the room was dark. "A light!" cried Ralph Benton's voice. "Turn on the lights! Something has happened to Mr. Allen."

"What has happened?" asked the adept from the darkness.

"Mr. Allen has fainted," replied Ralph. "He was not well and did not want to come here anyway. Why don't you turn on the lights?"

Dr. Lampkin felt some one touch his elbow and the warm breath of the detective on his ear.

"Remain where you are," whispered Hendricks. "Blast his ugly picture!"

"Give us a light, I say!" cried Ralph angrily.

"See, he—your Mr. Allen is waking," said the adept.

"Waking?" sneered Benton. "Do you think that is the way he usually retires?"

The darkness was lifted slightly. How it was done Lampkin could not tell. Montcastle and Ralph could be seen standing and supporting Allen between them.

"The door is open," said Kola. "You'd better all go out into the fresh air."

Montcastle and Allen were groping toward the door, led by the adept. Suddenly Ralph, who had not moved, raised his voice:

"I don't intend to leave till I know what this infernal business means. I say, Montcastle, give me a match!"

"Curse the young daredevil!" exclaimed Hendricks, still near to Lampkin, and the doctor heard him take something from his pocket which rattled like pieces of metal. "I'll pay him for this."

Then the flute note sounded twice. "The master wants us to retire," said Kola.

"Who the devil is 'the master?'" sneered Ralph. "This thing touches my own family, and I am going to look into it."

"Don't be a fool," cautioned Stanwood. "The ladies are here, and they have already had enough!"

"For my sake, come on, 'dear!'" implored Miss Hastings. "We don't know where we are, and"—

"Montcastle," commanded Ralph, "take the ladies out. I am going to look into this. It's all a trick to work on our imaginations by that infernal Hendricks."

Lampkin heard the metallic clicking in the detective's hand and saw him glide suddenly forward. He had no sooner reached Ralph than another clicking sound was heard. There was a struggle, a rattling of a chain, and an angry oath escaped Benton's lips.

"What do you mean?" he cried, turning on Hendricks and raising his handcuffed wrists threateningly.

"You are under arrest for the murder of your father," said Hendricks. He whistled shrilly, and a light was turned on behind a screen in the rear. Its beams partially lighted the long room and revealed a strange sight. Hendricks, his long beard and wig suspended around his neck and as red in the face as a lobster, stood holding a revolver in his hand and grinning at his prisoner.

"You are under arrest for the murder of your father," he repeated. "The rest of your party had better retire."

Ralph's manacled hands hung down before him. For a moment he seemed

speechless. Miss Hastings leaned toward him excitedly and put her hands on his arm.

"For God's sake, be brave, darling!" he said. "It's all a mistake. It will be cleared up at once." He turned to the detective:

"I know too much to struggle against the law," he said. "What do you intend to do with me?"

"Lodge you in the police station till it is decided whether you can get out on bail," replied Hendricks.

Ralph laughed. "It's all a joke," he said, turning to Miss Hastings. "Julia, go home with sister. I promise you on my honor to be home to-night. Have I ever told you a falsehood?"

"No," said Miss Hastings. She started toward him, but Stanwood drew her to the door, where Montcastle stood trying to calm Miss Benton. "Come along," he said. "It is no doubt as he says. Benton will come on later."

Miss Hastings covered her face with her hands and drew back irresolutely, but at a sign from Ralph she joined the others and went out of the house. The front door closed.

"Did you want a policeman, sir?" sounded Kola's voice from the hall. "If so, he is here."

"He may wait out there," replied the detective. "I don't think Mr. Benton is going to give us trouble."

"No; I'll take it all right, I promise you," said Ralph, with a dry laugh. "I couldn't fight a cat with these things on. I say, Hendricks, enough of a thing is a glorious sufficiency. Take 'em off. I know it's all a joke. You are trying to get even for my obstinacy just now."

Hendricks ignored the remark. "On second thought," he called out to the adept, "tell the policeman to take Mr. Benton into the back room until I order a cab."

The policeman came forward and conducted Ralph to the small room at the end of the hall. Kola approached, and Lampkin, at a signal from the detective, came forward.

"Come back there with me," Hendricks said to the doctor. "I want to talk to the fellow. By the way, Kola, you did your part well. The cold chills ran up and down my back like mice in a revolving trap."

"Did it answer your purpose? That's the chief thing," replied the adept.

"Can't say yet," replied the detective. "It won't do much harm anyway. The women stood it beautifully. I was afraid they would go into hysterics."

"They are always anxious to understand psychical things," answered the adept. "It was Mr. Allen and Mr. Montcastle who objected most to coming. To tell the truth, Mr. Hendricks, the arrest astounded me. I should think—"

"Don't think just yet," interrupted Hendricks, with a laugh, and he led them back to the little room in the rear.

CHAPTER XVI.

They found Ralph and the policeman in the small library in the rear. It was lighted only by a low burning gas jet which swung over the center table. Ralph sat on a divan, the chain of his handcuffs hanging between his knees. The tall, heavily built policeman leaned in the doorway.

Ralph laughed as Hendricks entered. "I can't complain at this treatment, Hendricks," he said, "and, as to the cab, I'm glad you are not going to haul me off in the black maria. As it is open at both ends, one would be liable to sit in a draft."

Hendricks smiled, but did not reply. He turned to the policeman:

"Go get a glass of beer and wait on the stoop," he said.

Ralph began to fumble in the pocket of his waistcoat and produced a quarter of a dollar.

"I say, Hendricks," he said, rising and tossing the money on the table, "you won't mind if I stand treat, will you?"

"Not at all," was the answer. The policeman grinned as he picked up the coin and touched his hat to the young man, who had resumed his seat on the divan. Hendricks sat down and drummed on the table with his fingers. Lampkin and Kola stood near the door. "I say, Hendricks, all jokes aside," said Ralph, "are you detectives—you fellows with names that are household words, as it were—are you ever badly mistaken?"

"Seldom when we get along as far as I have with you," answered the detective. "At any rate, you are an agreeable prisoner. You make it a pleasure instead of a task. I may say you fill the bill ideally."

The fire of Ralph's wit seemed to die out. His face grew serious.

"There is no use going further with

this," said he. "Tell me frankly what evidence you have against me."

Hendricks took a cigar case from his pocket. He passed it first to Ralph, then to Lampkin and the adept. Ralph was the only one to accept, and he became amused again when he tried to get a match from his pocket and was prevented by his handcuffs.

"You may as well unchain me," he said. "I promise not to break away. It would be folly for me to try to down the man at the door, you three and your hosts of hidden demons, who are the genii of 'the master's' dark lantern."

"I don't think I shall run any risks," said the detective, striking a match and holding it to the end of the young man's cigar. "A bird in hand, you know, 'is worth two on the roof,' as the Germans put it."

Ralph nodded.

"The only thing that puzzles me," he said, "is my arrest. It is incongruous. I am the stone that spoils the mosaic. I ought not to be in it, but it seems that I am. Hendricks, I have had a queer sort of admiration for you in the past, but I have never thought you could be stupid enough to arrest the wrong man under any circumstances. If you don't unchain me before I explain, you shall cease to be my ideal detective."

"I should dislike that," answered Hendricks, "but I presume my pride must suffer—that is, if you are the wrong man."

Ralph puffed two or three times to keep his cigar alight. Suddenly he bent his puzzled gaze again on Hendricks.

"Tell me exactly why you have arrested me," he demanded. "You are woefully off the track. Honestly, that's a fact."

"Am I?" Hendricks shrugged his shoulders and glanced slyly at Lampkin whose eye he caught. "I know that on the night of the murder you came in at the side gate and crossed the grass in a bee line for the north walk. I found your tracks, the only footprints not explained by others, near the body of your father. These tracks I traced to a certain point on the walk, where—"

"Where the maker of them vanished in the air like the nightmare we saw just now," put in Ralph, with a smile.

"So it seemed at first," agreed Hendricks, "but the other day Wilson, the gardener, recalled the fact that in order to surprise the young ladies, who had expressed a desire to have a swing, you had yourself late in the afternoon hung one from a bough of a big oak. The night your father was killed it was hanging at the edge of the walk, not five feet from the spot where the footprints ended. What had become of the swing Wilson could not imagine, but I found it in the hollow of the tree above the lower boughs."

Hendricks paused, knocked the ashes from his cigar and took two or three draws at it, his eyes the while fixed on the young man's face.

Ralph smiled.

"Well," he said, "go ahead."

"It suddenly occurred to you," continued Hendricks, "that the sand was taking the impression of your feet, and you sprang to the swing. You climbed one of the tow ropes to the boughs to which it was fastened and then drew the swing up after you. After this you unfastened the rope and crammed it into the hollow of the tree."

"What did I do then?" asked Ralph, coolly. "I swear, you have as many eyes as a water beetle. I wonder if even you could tell what I next did."

Lampkin, who had had considerable experience with criminals, decided admiringly that this was the coolest culprit he had ever met. He glanced at the adept and was astonished to see a broad grin on his face.

"You crawled out on a long bough till it bent down to the roof of the wood shed," answered Hendricks.

"This reached, you next went from it to the roof of the wellhouse, thence to the roof of the veranda, thence into your room through an open window."

"Pretty good!" said Ralph, calmly. "But has it occurred to you, Hendricks, that some one else might have done all this?"

"I went into your room and searched it," went on the detective. "I found the dress suit you had worn that evening, and on it were fragments of tow from the swing."

"I presume it would be hard for me to prove that some one else had worn my suit of clothes that night," said the young man. "Did you find out where I had been in the city that evening?"

"To your club first, then to the Casino with Van Alston."

"Exactly," said Ralph. "How uncomfortable to know that one has been traced like that! And to be suspected of such a crime! I don't fancy it at all, Hendricks. I am not a lawyer by any means, but I am not such a fool as to believe you could hang me with that chain of circumstances."

"You are heir to a large fortune left by your father," went on Hendricks, impressively. "Only a short while before she heard the report of the revolver, according to the testimony of Miss Hastings, she overheard your father say to some one: 'You are no child of mine from this day forth. I shall disown you to-morrow.' You and your father had recently quarreled."

"Stop!" cried Ralph, rising in excitement. "She did not testify that. I did not hear her."

"She did," asserted Hendricks firmly. Ralph turned to Lampkin.

"Did—did you understand Miss Hastings to testify to that?" he asked in a trembling tone.

"I did most certainly," answered the doctor. "Mr. Hendricks quoted her exact words."

(To be continued.)

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MICHIGAN DAIRYMEN'S ASSOCIATION.

(Concluded).

Canadian stock has been imported, fed and exported. We should wake up. Decreased supplies will come from the West and decline has already set in. In the changed condition no state is more interested than Michigan. It is situated and adapted to produce valuable stock—cattle, sheep, horses and hogs. Mean-time dairying will not retrograde. But many are not adapted to dairying and their withdrawal will improve the prospects of dairying. Weeding out the unprofitable one-third of the stock will also be another important source of gain. The success of the industry rests on the cow. Values are likely to decline; the only way to counteract this is to improve quantity and quality. The cow is the basis of the business and the dairyman should seek to select and improve them; his whole future rests on his cows.

Mr. Campbell said the cattle business had not gone West on account of the freights. Our farming is made up of fragments and varies under different conditions. We are a composite people with many and varied interests.

Prof. Smith said the introduction of Jerseys and Holsteins had been a blessing in some respects and a curse in others. To raise Jersey or Holstein grade steers is a detriment.

Mr. Johnson would kill every male from dams that do not produce at least one and one-half pounds of butter per day, and two pounds if a thoroughbred.

Mr. Helm would kill every female if not of value as to points.

Mr. Gridley had found it easier to maintain beef strains than those for the dairy in Shorthorns. Had best success in crossing with Jerseys.

Mr. Helm would not cross-breed. Reject all that do not yield 5,000 pounds a year. His standard is 7,000 pounds a year; 9,000 pounds a year can be attained.

Mr. Childs said milk and beef could be secured by using Shorthorns of a dairy type.

Mr. Gibbons thought this the real question of interest. Although close to the isles of Jersey and Guernsey, and to Holsteins, they have best success with dairy Shorthorns. The first Shorthorns he knew were of the dairy type, but the demand from the West for the beef type superseded them.

Mr. W. Campbell admitted that food will not produce both milk and beef at the same time, but he has no difficulty in feeding up his dairy Shorthorns when dry. The trouble is to get them dry.

The most humorous address of the meeting was that of Frank E. Mills, of Ann Arbor, on "Holstein Cattle," in looking over the proceedings of the last meeting, he had concluded there was only one breed of estimation in that meeting. They were of ancient origin, dating back to the productive and vigorous spotted cattle bred by Jacob. Spotted cattle are frequently mentioned in history. Roman history mentioned spotted dairy cattle. Friesia dates back to Roman times. Holland has grown to be the richest country per capita in the world. It depends more on dairy cattle than any other people. It was the first country to depend on tame grasses and clovers. It is also noted for the excellence of its veal. Except the Jerseys and Devons, all breeds trace strains of the Holsteins; the former must trace to the solid colored small cattle of Laban. Every show Jersey is raised on a Holstein cow.

At the evening session Ira Johnson, of Grand Rapids, was called to the chair. Colon C. Little, of Coopersville, spoke briefly of "Dehorning the dairy cow." There are two sides to the question; also two proper ways to keep a dairy cow; first, keep them tied closely in the stall nearly all the time, except in favorable weather in the summer; the other way is to turn out into well-lighted, well-ventilated covered yards. There is no necessity to dehorn under the first plan, but he would have it done under the second plan. His herd is kept after the first method. Would not dehorn a dairy bull, but would never allow any risk. Dehorning cattle for the western ranges is a different matter from the topic.

Prof. C. D. Smith thinks it an act

of mercy, although a painful necessity; he would have it done while calves if possible.

J. W. Helm, of Adrian, discussed "Big cows vs. little cows for milk, butter and cheese." He questioned the wisdom of trying to increase the size of Jersey cows, saying that in the mechanical world a small, compact machine is always preferable to a large one if well adapted to its work. Size demands more food to sustain. He cited the World's Fair tests as showing that Jerseys gave most milk, also most cheese; their milk also gave the largest percentage of cheese and of butter, and at a less cost per pound. Beef, of course, demands large carcasses but as a dairy cow the small one leads all others. All should beware of that delusion, the general purpose cow.

Mr. Monrad asked why not extend the principle to include goats? Mr. Helm said that would be right if their production equaled that of larger cows, as with Jersey cows. The point at issue is one of relative cost.

Prof. C. D. Smith talked on "The balanced ration in theory and practice." He said that a balanced ration is evolved from practice rather than laboratory tests. The German ratio is 1 pound of protein to 5½ of carbohydrates, while the American ratio is 1 pound of protein to 6 pounds of carbohydrates. By consulting the practice of 126 feeders throughout the country, it is found that they average 24 pounds of dry material per head of stock fed, and its ratio was 2.15 pounds of protein to 13.74 pounds of carbohydrates. In his practice he allows cows to select foods according to their tastes; hence his bulletin conclusions are derived from stable experience. You can never get a dairy cow better than the herdsman. He can secure large results by continuous, intelligent feeding, but not from over feeding, which was a sin at the World's Fair test.

Mr. McBride thought results frequently depended on conditions accompanying feed as much as on the feed. Frequently a ration with a wider variation from the ratios given will be more economical owing to cost. Milk is a product of the nervous condition of a cow, as well as of her feed. He believes in the nervous theory as the more important; hence he dissents from the theory that a balanced ration is the all important thing to depend on.

Prof. Smith's allusion to the drop in yield of the College herd, and the variations of daily milk tests, gave force to this statement.

James N. McBride, of Owosso, then spoke briefly of "Evolutions of stabling and stable fastenings." He began with rigid stanchions, then used swing stanchions, then tied with a strap around the neck and with a chain fastened to a post; now he uses a stall 24 feet wide with a manger in the center, the cows running loose; after eating, the cows are turned into the other section and hogs let in after the western plan; cleans out each week. This is the easiest plan he has yet tried and is cleanly, but requires a large amount of litter.

The Jersey Cattle Club then gathered at the Occidental Hotel and elected the following officers: President, Colon C. Little, Coopersville; vice-president, James N. McBride, Owosso; secretary and treasurer, Ira O. Johnson, Grand Rapids.

Thursday morning C. P. Goodrich, of Fort Atkinson, Wis., talked on "Feeding and Care of Dairy Cows," his address being along the same lines as heretofore reported in connection with institute work.

The officers elected by the Association for the ensuing year were as follows: President, E. A. Haven, Bloomington; vice-president, C. C. Little, Coopersville; chemist, Victor C. Vaughan, Ann Arbor; secretary and treasurer, S. J. Wilson, Flint; directors, Azro Fletcher, Ypsilanti; W. J. Robertson, Middleville; F. W. Warner, Farmington; F. M. Mills, Ann Arbor; B. E. Peebles, Fairfield. Grand Rapids was selected as the place for holding the next meeting.

The committee on resolutions reported as follows: 1st, That we approve the vigorous course of Dairy and Food Commissioner Grosvenor in his prosecution of oleo dealers who are violating the laws of the State, and commend the action of the Governor and the Attorney-General in supporting him. 2d, That the arbitrary course pursued by Justice Sellers in the oleo cases in Detroit deserves our severest condemnation; and that future similar action by him ought to be followed by his removal from office. 3d, That the thanks of this Association are hereby tendered S. J. Wilson for his arduous and faithful service as secretary of the

Association. Its long and prosperous career can be largely traced to his indefatigable labors in its behalf. 4th, That we commend the course of the Secretary of Agriculture in his efforts to extend the market for dairy products, and his general course in the duties of that office. 5th, This resolution itemized individual services in promoting and conducting the session, including Azro Fletcher, local secretary, and Prof. Cleary, of the college. 6th, We believe that the dairy interests of the State are of sufficient importance to warrant us in asking of the State Legislature an annual appropriation of \$500 for their advancement. 7th, Whereas the productions of Michigan dairies pay excessive transportation rates, and our property pays excessive taxes as compared with other forms of property, resolved, that we endorse and commend the course of Governor Pingree, and pledge our support to him in his efforts to obtain such equality of right and privilege as will cause all kinds of property to bear their equal and just proportion of all taxes.

The resolutions were unanimously adopted, and by a separate resolution the names of ex-President E. N. Bates and Retiring President James N. McBride were added to the list of life members of the Association.

The judges on products reported the following results: Creamery butter, 15 entries; first prize awarded to Azro Fletcher, of the Ypsilanti Dairy Association, whose entry scored 94½ points. Dairy butter, 12 entries; first prize awarded James H. Murray, of Salem, whose entry scored 95 points, thus sustaining the assertion that the best goods can be made where all the details are under the careful personal supervision of the producer and maker. Slight differences of color, salting, grain and package made material differences in the summing up of points. Cheese, 16 entries; first prize awarded to B. E. Peebles, of Fairfield, whose entry scored 99 points. Mr. Peebles gave the premium cheese to the Association, and it was divided and sampled by those present.

Only two essays were handed in, both pertaining to "Tinware." They were read anonymously and the first prize awarded by vote to No. 2, which proved to have been written by George True, of Armada. In the afternoon C. P. Goodrich talked an hour on "Mak-

ing and Marketing Butter." The meeting then adjourned sine die.

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DETROIT, SATURDAY, FEB. 26, 1898.

This paper is entered at the Detroit Postoffice as second class matter.

MARCH '98.

If the date on the yellow label on your paper is March, '98, your subscription expires with this number, and to avoid missing any numbers renewal should be sent in at once.

We hope your experience with The Michigan Farmer has been satisfactory, and that we may receive your renewal at once.

How about that neighbor who does not take The Michigan Farmer? Can you not persuade him to order with you this time according to our proposition sent you? Try it. It will help him, help you, and help us.

The course pursued by a large number of the daily journals of the country regarding the disaster to the battleship Maine has been a disgrace to journalism. The most sensational reports were printed in extra editions, which were afterwards shown to be without a semblance of truth, and the public kept in a state of excitement that these journals might make a little money. Every method possible was taken to keep the people inflamed against the Spanish government, and down-right lying was resorted to without compunction. It was a most revolting spectacle to see the means taken by these papers to make money out of a great national calamity.

It is stated at Washington that reports received at the State Department relative to the wheat conditions in India and Siberia are of considerable interest to those watching the markets and estimating as to the probable prices for the next year's crop. India is one of this country's heaviest competitors for the wheat trade of Europe, and the following figures show her exports there for a period of years, stated in cwt., of 112 pounds each: 1892, 30,303,425; 1893, 14,903,453; 1894, 12,155,551; 1895, 6,867,791; 1896, 10,002,912; 1897, 1,910,553. These figures show a general decrease in India's exportation of wheat to European countries, even without taking into consideration that of 1897, which was, of course, far below the average. The United States Consul-General at Calcutta draws conclusions from the estimates of the statistical bureau of the government of India that, if the present season continues favorable, the wheat available for export will reach about the average

for the past ten years—22,000,000 to 28,000,000 bushels. Owing to a lack of seed, this year's wheat acreage is not up to the normal, and large areas have been sown to rice and millets, so that these products will be kept at home, leaving the wheat for export.

GLORIFYING THE CORN CROP.

Last week a convention was held in Chicago, composed of delegates from the Middle and Western States, with the avowed purpose of booming corn as a cheap and valuable food, whose actual value has never been fully realized. The intention was to continue the work of Mr. Murphy, who spent some years in Europe for the purpose of teaching the people over there the value of corn as food, and the various ways in which it could be prepared for the table.

Frank D. Coburn, Secretary of the Kansas State Board of Agriculture, was made chairman of the convention, and in his opening address gave free rein to his enthusiasm over the merits, value, and future possibilities of the corn crop. Here are a few interesting extracts from his address:

"The object of our coming together is to confer about the ways and means by which America's premier crop and wonderful cereal may be better understood and appreciated by the world at large. We are satisfied that scarcely one person in a hundred thousand comprehends the magnitude of its product, its money value, its innumerable uses and possibilities, or its wholesomeness as a universal food for animal and man. The central western states are the home and habitat of Indian corn. Statistics show the acreage devoted to corn to have been in recent years about 10 per cent greater than the aggregate devoted to wheat, oats, barley, buckwheat and potatoes; in 1886 the acreage was 18 per cent greater. We hear much of the wheat crop, and the casual reader of the newspapers would suppose there was no other cereal which could rightly be compared with it. Statistics, however, show that during the last decade the value, one year with another, of our corn crop, has been nearly double—39 per cent greater than that of our wheat. The value of the corn crop in this decade has been about the same as the combined values of wheat, oats, barley, buckwheat and potatoes produced in the same period. "In the last three or four years we have heard much of silver and its importance, and from the attention, oratory and printers' ink devoted to it, we might suppose that it was the one interest before which all others sank into insignificance. The average annual product of American silver mines during the three years ending with 1896 was less than \$46,500,000, while the average value of American corn for each of the last ten years has been nearly \$68,000,000, or more than thirteen and a half times the value of all our silver, which in the minds of so many is endowed with well nigh godlike attributes. Adding to the silver the output of gold, we annually produce corn worth more than seven times as much as both these precious and much coveted metals."

There is a good deal of truth in Mr. Coburn's statements, and it would be difficult to overestimate the value of the corn crop to the American farmer, and to the agriculture of the country. It is the crop that enters most largely into the economy of the farm, and upon which is based nearly all the business of the farm during each year. This is so whether the farmer is conducting a dairy or stock farm, or is pursuing mixed husbandry. In this State about all the corn raised is consumed within its borders, and a shortage has to be made up by importations from other states. The reason why corn does not cut so much of a figure in market reports arises from this very fact: It is consumed on the farm, and its market value therefore is much less important to the farmer than that of the wheat crop, of which so much larger a percentage is sold. Wheat in this State is the great money crop. Upon its price depends very largely the amount of ready money the farmer has during the fall and early winter months. His crop is nearly all sold, the amount retained generally being sufficient for seed and bread for the household. Corn is fed out, and the products, beef, pork, mutton, butter, cheese, milk and poultry—for corn is the basis for the production of most of these articles—are sent to market instead of the grain. While, therefore, the farmer is interested in the value of these several products, the price of corn

is not given so much attention as if he were marketing it direct.

There is one thing we would like the corn enthusiasts to remember, and that is this: Every extra bushel of corn shipped abroad for food cuts down to that extent the demand for American wheat and flour. Whether it is more advantageous to sell corn than wheat is the question. It will simply result in cutting off the demand for wheat and flour and substituting a demand for corn if the corn enthusiasts are successful in accomplishing their aims. We are inclined to think that corn should be kept on the farm and wheat sold. It strikes us this is better for both the farm and the farmer. But we want it understood that we have no intention of depreciating the value of America's greatest crop—quite the contrary.

STILL AGGRESSIVE.

Cable reports from Germany show very plainly that the feeling against American agricultural products is growing more intense, fostered by the land-holders, who have formed themselves into an organization known as "the federation of husbandry." This organization is preparing to take an active part in the politics of the empire, and the members are quite frank in stating that their intention is to entirely exclude American agricultural products of every description. Prince Bismarck and a number of members of the reichstag are said to be friendly to the movement, and are working in its interest. The coming election for members of the reichstag will probably be contested upon the question of the exclusion of agricultural products, and whether or not the agrarians are strong enough to secure the return of a majority of their friends to the reichstag is a question of great importance to the German people as well as those of the United States.

To show how bitterly the struggle is likely to be contested, and the feeling against Americans, the remarks of the Deutsche Tages-Zeitung, the leading agrarian organ, upon the reception of the news that the House of Representatives had called for the correspondence relative to American beef, fruit, horses and adulterated German wines, may be quoted. It said:

"We sincerely hope the Americans will look thoroughly into these German measures. For one thing, they will arrive at the conclusion that Germany has dealt as leniently as possible with them. Then, we harbor the hope that the insolence of these Yankees will be so increased by the discussion of these matters in Congress that Germany will not be able to do otherwise than follow up the paper measures by more palpable ones. For this reason we do hope the Americans will go at it in great style."

But the agrarians will not win without a struggle which will shake the empire to its center. Upon the other side are ranged the masses of laboring people, the manufacturers, and most of the professional classes. The manufacturing interest realizes that cheap food is a positive necessity for cheap production, and that to raise the price of food for operatives means higher wages, increased cost of production, and a handicap upon all goods exported. With the present intense rivalry for the world's markets being waged by the manufacturers of Great Britain, Germany, France and the United States, the German manufacturer realizes that the market for his products depends largely upon his ability to supply them at as low a price as his competitors. It may readily be imagined, therefore, how he views a movement which threatens to cut off his market and turn it over to one of his competitors. It is a struggle for existence with him,

and he will certainly fight hard for his industrial life. With the markets for agricultural products in their own hands, values would surely be raised to such an extent to threaten the laboring classes with starvation, especially as it would surely cut off employment. That this view is entertained by many in Germany, the following extract from the Voissische Zeitung, commenting on the paragraph quoted above, shows clearly:

"It would be hard to unveil in a more frivolous manner the designs of the federation of husbandry to drive us into a tariff war, the enormous damage of which cannot be foreseen."

Meanwhile the fight goes on in the reichstag, and Americans and American products are openly attacked upon every opportunity. Recently a meeting of the federation of husbandry, specially called, passed a resolution calling upon the government to subject all American horses to six weeks' quarantine and to indelibly brand them. The society also decided to prepare statistics regarding horse-raising in America.

Russia has also threatened reprisals on account of the new and very severe regulations of the German minister of agriculture, especially those regarding the importation of Russian hogs.

TESTING NEW VARIETIES OF SEEDS.

A correspondent in Huron County, Mich., Mr. Geo. M. Cross, writes us as follows on this subject:

"I have been a subscriber of The Farmer for many years and could not get along without it. There is one thing that I think, if added, would be a benefit to the readers as well as the paper, and that is a column devoted to detailing experiments in raising certain kinds of seeds, and their success or failure. I buy a great many kinds that are failures in this climate, and if I could report such failures it would save a great many others from the same sad experience."

"For instance, I raised cowpeas that would not come to maturity in this climate, and I raised coffee berry so much lauded by some seedsmen. The berry matured all right here, and it makes a very good drink, but it does not taste like coffee. By such reports farmers would be saved the expense of buying seeds which would not succeed in their climate; and then if you could give the correspondent's post-office address, so we could write each other, it would be a great benefit to us."

Our correspondent is assured that the columns of The Farmer are open to him, and all other readers, at all times, to detail their experiences. They will be always welcome. In this connection we would state that The Farmer has advocated doing away with free seed distribution by the government, and using the appropriation in the line of experimental work suggested by our correspondent. That the Secretary of Agriculture, through his agents, hunt up every species of plant, grain, seed, or fruit that promises to be an improvement over those now being grown; that these be sent to experiment stations in every section of the country where they are likely to prove useful; that reports of their success or failure, with full descriptions of each, be published in bulletins and sent to every farmer applying for them; that experiment stations be placed with regard to climatic conditions, not State lines, so that the benefits will be greater from each. The free distribution of seeds has developed into a grand humbug, which is only carried on for political expediency, and for the advantage of a few beneficiaries. By expending the appropriation in the lines suggested the benefits would be general to the farmers and horticulturists of the whole country. With such a system the deception of dishonest seed dealers, or the misstatements of the ignorant regard-

ing seeds, plants, fruits, grains, vegetables, etc., would lose their power to deceive the farmer, and therefore these classes would have to go out of business.

In regard to furnishing addresses of correspondents, we can say that as a rule they object, owing to the letters which are sure to pour in on them, and which they find impossible to answer. After a man gets a dozen or twenty letters a day for a week or two on a subject in which he has no special interest, he stops answering them, and then they come to this office instead. Every correspondent would have to hire a clerk to keep up with his mail, and would soon conclude that it did not pay to write about his methods or experiences in an agricultural journal.

A correspondent of Colman's Rural World, announces, after repeated trials, that the sugar beet cannot be successfully grown in Missouri. He says:

"I have spent 31 years experimenting in Missouri soil and climate, with the carrot, parsnip, beet, rutabaga and common turnip. We can, in about one year in five, raise crops in quantity and quality that are hard to excel. Our average dry, hot summers are fatal to perfection in root crops. The more equable distribution of moisture during the growing season of the lake regions; the sandy, friable, easily tilled nature of the soil—the great arid region, where irrigation will keep up a continuous growth from start to finish, will be the spots where the sugar beet will be a success in sugar making—but not in Missouri."

The question of whether the State law compelling the closing of saloons on Sunday should be interpreted strictly, or whether the owner should be allowed the privilege of opening its doors for the accommodation of himself and his friends, was decided last week by the Supreme Court in terms which cannot be misunderstood or evaded. The particular case was that of a Grand Rapids saloonkeeper who had been convicted of keeping his place of business open on Sunday. The testimony showed that the saloonkeeper and three other men were seen going into a hallway which opened upon the street and also opened into the saloon. The witness followed and saw the bartender near the door. The proprietor said in response to a query that the men were there to inquire about friends. He said that none of them entered the saloon, but that he got some tobacco from the saloon for one of them. He also testified that the bartender passed through the saloon on that day. The defendant's testimony showed that the saloon was not closed on the day in question, within the meaning of the law. Defendant urged that his family had a right to go into the saloon, and that the bartender was a member of his family. Here is what the court said:

"The statute means that saloons shall be kept closed the first day of the week, and compliance with it means that all doors and openings shall be kept closed, whether in the front or rear. It is apparent that this hallway was made the runway from the street into the living room by passing through the saloon. It was immaterial whether any liquors were sold there that day or not. The object of the statute was to cut off all subterfuges or excuses for the violation of the statutory inhibition, and the keepers of such places must keep them closed at their peril. There was a front door to this saloon, the hallway was not necessary. The hallway did not lead into the living room, but into the saloon. It was into this hallway the young men were taken on the morning in question. Confessedly that door was open and the door from it into the saloon was open. This was a plain violation of the act. The conviction must be affirmed, and the court below directed to proceed to judgment."

Will you please answer the following through your paper: Is there a law against coloring butter? J. W. T., Plymouth, Mich.

No, there is no law against coloring butter. There is one against coloring substitutes so as to resemble butter.

Thin and impure blood is made rich and healthy by taking Hood's Sarsaparilla.

For The Michigan Farmer. SOMETHING MORE ABOUT OREGON.

I am a reader of your paper and am much interested in its perusal. I recently read an article in your paper headed Oregon, which would indicate that that great state was a paradise. If that be the case so is the state of Michigan. To be sure, the people in Western Oregon may grow their cabbages, lettuce and onions in the winter months, and have them fresh from the garden; and the state has great wealth in minerals and forests which surpasses all other states in the Union except the state of Washington. Portland is situated on the Willamette river, and is a very fine city of 70,000 inhabitants, with a growing and prosperous commerce.

But are there not some drawbacks? During the winter months, from November to May, it rains and rains, sometimes a week at a time, and the fog is so thick that one may cut it with a knife into quarters. This is owing to the Pacific trade winds. And the country roads round about are so soft and deep that it is necessary for a farmer who goes to town to have a four-in-hand attached to a light vehicle. To clear an eighty-acre lot after the timber is removed from the stumps is the work of a lifetime. It is no fool of a job to remove a hundred stumps from an acre, that will measure from a foot to nine feet across. These are the stumps of red cedar, Douglass fir, spruce and hemlock, and it requires more than the age of man for them to decay. They must, therefore, be removed by some artificial process before the ground can be properly cultivated, and it is worth from twenty-five to fifty dollars an acre unless some ingenious Yankee invents a process to remove them cheaper. And besides this the timber leaves an acid in the soil that is detrimental to the growth of crops until the land has been cultivated and fertilized for a term of years. Be sure there are exceptions, for along the river bottoms the land is remarkably productive; but these river bottoms are subject to tremendous freshets. Most of these streams head upon the Cascade Mountains, where it is no uncommon thing for the snow to accumulate to the depth of twenty feet during the winter months, and when the spring rains and the chinook winds blow these streams are subject to sudden and tremendous freshets—with the exception of the Columbia, which heads in the northern portion of the Rocky Mountains, thence runs north and forms a great loop in the Canadian possessions, and the snows of those northern sections melt later in the season and produce a flood about the first of June. But Eastern Oregon and Washington are as much different from the western portion of the state as Michigan is from Wyoming or Colorado. Very cold in winter, and excessively hot in summer, the most of crops cannot be successfully cultivated, except by irrigation. But the vast plains are capable of supplying food for thousands of sheep, horses and cattle, and from 1894 to the present year there has been no profitable market for them. Horses could be bought by the hundred for five dollars a head; but since the great gold boom in the Klondike there is a great boom in the prices of horses, and in meats of every kind, to supply the wants of the gold seekers.

Vermont. J. PECK.

FARMERS' INSTITUTES.

CASS COUNTY.

The session opened with an address by Mr. J. N. Stearns, "Successful orcharding in Southern Michigan." He advised the use of ashes as a fertilizer for all kinds of fruit. Owes his success to these things: Proper pruning, proper cultivation, proper fertilization, and shallow and frequent cultivation. The farmers of this section should plant young apple orchards, as the old ones are of little value. Discussion proved that farmers are troubled with sun-scald on young trees. There seems to be no remedy for this. A prominent fruit-grower advised thinning peaches—makes them larger and finer flavored, and they bring better prices. One thought farmers were not observant enough. They should study their business more carefully, and observe the effects of different methods.

At the afternoon session Mr. C. P. Goodrich, Ft. Atkinson, Wis., spoke on "Selection, care, and feeding of a small dairy herd." He described the good dairy cow; advised feeding skim-

milk to calves; thinks clover hay and oats best feed for milch cows; we should study our cows and feed accordingly. No discussion on this paper.

"How best to secure the clover crop," by Prof. Samuel Johnson, Dowagiac, was the next paper. He has been unable to get seedling for past few years; late frosts, drouths, and grasshoppers doing much damage. Advised sowing plaster on land. Discussion as to whether you could buy pure plaster. Some think the plaster we get to-day is worthless.

Prof. Pettit, of the Agricultural College, on "Insects," warned the people against the asparagus beetle, which is very troublesome in some sections. Also described the Hessian fly, and other insects.

February 9, the conductor of the Institute, C. B. Charles, Bangor, made an address on "Improving and utilizing low lands." The swamp is not the place for lazy men. What you need on swamp land is perfect drainage, good seed, and proper cultivation; should use open drains, as tile drains are of little value on muck; advised frequent shallow cultivation.

Next was a discussion as to whether we need a State appropriation for Institute work. A number of the audience did not approve of it; thought the Mining School and State Health Board should be abolished. Others thought we could not have a successful meeting without the assistance of the State. The audience were about equally divided on this subject.

Afternoon—Question Box: Free seed distribution was discussed; most farmers present did not approve of it. The cause of poor butter was also discussed. Farmers seem to take a lively interest in dairying here.

Jason Woodman, of Paw Paw, on "Cattle feeding—its prospects and practice." Says it takes a man with brains to make a living on a sandy farm. We all agreed with him. Thinks it does not pay to stanchion cattle when fattening them. He lets them run in yard, with warm shed to lie in. Draws corn fodder (unhusked) from field twice a day, and feeds in racks in yard. Clover hay at noon. Also lets them run around straw stack. Salts three or four times a week, and has water where they can drink at all times. He prefers heifers; they will fatten quicker. It was thought his weight gains were small for the length of time he fed. One well-known farmer of this county thought they would fatten quicker if stabled and groomed like a horse. He also advised using ground feed.

A paper on "Successful Wheat Culture," by C. A. Thompson, this county, was read by the secretary. He plows deep, works land well, and has compact level seed bed. Sows medium late varieties, as very late ones are apt to rust. Sows medium deep with drill; if land is fertile, 1½ bushels per acre; if sandy and poor, more seed is needed. Harvests when a little green. One man thought one bushel of seed per acre was enough; also that shallow plowing on sandy land was advisable.

The next paper was "The Future of the Michigan farmer," by H. A. Dewey, Pokagon. He thought one of the great mistakes of our farmers was over-cropping. Should work less land, and work it more thoroughly. If we farm carefully, Michigan will be in the lead in agricultural pursuits.

Mrs. Mary A. Mayo, Battle Creek, conducted the Woman's Section. The music was excellent. The meetings were well attended, and much interest shown. Let the good work go on.

P. J.

FOR RELIEVING THROAT DISEASES, COUGHS AND HOARSENESS, use "Brown's Bronchial Trochea." Sold only in boxes. Avoid imitations.

Minnehaha Falls.

These romantic Falls, known all over the world as the scene of Longfellow's poem, "Hiawatha," are situated in one of the beautiful public parks of Minneapolis, Minn., and are visited by thousands of tourists from all parts of America and Europe. Northrup, King & Co., the seedmen of Minneapolis, have caused to be printed, on heavy ivory paper, a fine copper etching, size 15x17 inches, which is said to be the most artistic print of them that has yet been produced. On receipt of ten cents, and providing the name of this paper is given, they will send a packet of their celebrated School Garden Mixture of flower seeds, their catalogue for 1898 and the picture of Minnehaha Falls above referred to. Our readers should send at once, as this will not appear again.

Hot Springs of Arkansas the Carlsbad of America.

Now is the time of year to visit this famous health and pleasure resort. Excursion tickets at reduced rates via Wabash railroad. Call or write for illustrated pamphlet, "Utah and De Sota." From the Legend of Hot Springs. City Ticket Office, 9 Fort St., Detroit.

When writing to advertisers please state that you saw their advertisement in the Michigan Farmer.

WANTED about April 1st, married man to work on farm. Wife must be a good butter maker. Address, giving full particulars, FARMER, care of THE MICHIGAN FARMER, Detroit, Mich.

Tested Seed Potatoes.

Carman No. 1 and No. 3, Banner, New Livingston, Ex Early Ohio's, etc. Write us at once for prices on what you want. W. E. IMES, Vermontville, Mich. Seed Potato Specialist.

New Musk Melon "Paul Rose"

Mr. PAUL ROSE writes

Dec. 4th 1897.

"I have found in my experience of nearly 20 years in melon growing, that there is an increased demand in most of the large cities of the Northern states for salmon-fleshed melons, and further that the trade prefer their melons in the half bushel Climax basket. The Osage is too large for a basket melon. The Emerald Gem will not stand transportation or warm weather, besides it grows all sized melons on the same vine. The Paul Rose corrects these faults, and will carry farther, stand up longer, and give better satisfaction than any salmon-fleshed melon I have ever grown. It is the best melon I have found for the North. My experience with it in Southern Indiana the past season was highly satisfactory, except that it grows a little large. I shall discard the Osage and plant the Paul Rose melon instead. This melon I shipped this season to Pittsburgh, Cleveland, Toledo, Indianapolis, Chicago, and other distant points, and in every instance it arrived in good condition and sold for top prices."

Market Gardeners

will find this the most valuable vegetable novelty since we sent out the Osage.

Price: Pkt. 10c.; 8 Pkts. 25c.; ½ oz. 80c. 1 oz. 50c.; 2 ozs. for 80c.

VAUGHAN'S BARGAIN CATALOGUE is just a little bit better than some others. The illustrations are true to Nature and it "tells the whole story" of the Garden, Lawn and Farm. We mail it FREE with every order. 50,000 ft. of greenhouses devoted to New Canas Roses, Carnations, etc. We sell most kinds of Seeds at 3c. per packet—half the price of others. Write to-day. East or West, prompt service from Chicago or New York. We can surely save you money.

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Strawberries in
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SUGAR BEET for making sugar or feeding
that will grow 100 per cent.

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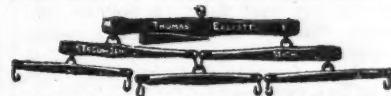
M. G. HARRISON, proprietor of the American Ginseng Farm at Centerville, Mo., (formerly at Redford,) is one of the successful growers of Ginseng, and publishes a treatise giving every detail of its culture, at \$1.00 per copy.



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buy a wagon that had everlasting wheels **WOULD YOU DO IT?** Wouldn't it be economy to do so? Well here's how. Buy a set of **Electric Steel Wheels**. They can't dry out and get loose; they CAN'T ROT OR BREAK DOWN. Don't make any difference what wagon you have we can fit it. Wheels of any height and any width of tire. May be the wheels on your wagon are good. If they are buy a set of these and have two wagons—a low one and a high one. Send for catalogue, it is free.

Electric Wheel Co., Box 58, Quincy, Ills.



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the best whiffletree made. Satisfaction guaranteed. Prices all right. Now is your time to get a set cheap. Write for prices and circular to
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Scotch Diamond Harrow.

BEST IN THE WORLD.

Cuts eleven feet wide with one stroke. Does more work than three strokes with any other harrow made in any kind of soil. Address

THOS. TIPLING, 113 East Wood-bridge Street,
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WANTED NOW. AGENTS AT ONCE to sell **Sash Locks** and **Door Holders**. Sample Sash Lock free for 3-cent stamp. Immense; better than weights; burglar proof. \$10.00 a day. Write quick. Address **BROHARD & CO., Dept. 111 Philadelphia, Pa.**

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics, send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for The Household to Mrs. Ella E. Rockwood, Flint, Mich.

For the Michigan Farmer.
INTEGRITY.

Unworthy of the sea is the fair barque
that sails
Safely alone upon a placid sea.
Only the brave ship that rides the rough-
est gales
Shall make the distant harbor gallantly.

Nor is it Genius that alone can rise
When Circumstance and Fortune smile;
That only wins life's highest prize
When lifted by men's fickle wile.

It is not Virtue that can only shine
Pure and unsullied where no trials
come.

'Tis they who battle with a will divine,
Who with the saints of light, go home.
HOPE LONG DE FERD.

HOME CHATS WITH FARMERS' WIVES.

NOTE AND COMMENT.

One thing has strongly impressed itself upon me as I have journeyed about the State this winter attending institutes, and that is the friendly feeling everywhere evident between townspeople and those residing in the country. Not an instance have I known where there has not been plainly manifested the kindest interest in and for each other, and as a rule, everybody seemed to know everybody else.

I have seen the farmer and his wife as cordially invited to the home of the merchant and as heartily entertained therein as the most exacting could ask for, and this not for one meal only, but over night and all the next day. I've seen the townspeople where the institute was held prepare entertainment for three or four guests with each family, and, if the full quota were not supplied, manifest in an unmistakable manner their disappointment.

More open-handed hospitality it has never been my privilege to see than in many of the towns where institutes have been held. In several instances at no little inconvenience to themselves have they invited farmers who were total strangers to spend the night at their homes, thus sparing them inconvenience as well as the expense of staying at a hotel.

We sometimes hear country people complaining that those from the city do not return in equal measure the hospitality which is tendered them, but I am convinced that this is by no means true. It may be different in the larger cities, but in the towns and villages there are just as many hospitable homes as there are in the country. One lady relates that in the home of wealth to which she was assigned for entertainment during the two days of the institute, four guests had been asked for. The table was loaded with choicest viands, and these were pressed upon her with a cordiality which left no doubt of its sincerity.

I am glad to see on every side signs of increasing friendliness between town and country. For my part many of the dearest friends I possess live in the city, and I have never had any reason to believe they think any less of me for that fact. I believe that many times it is the country people who are unwilling to go half way to establish friendly feelings with those who live in town.

REMINISCENCES OF THE KILBOURNE HOME.

Mamma Kilbourne had never heard of the "cyclo wash" or the patent "wringer." All washing, even of the heavy home-made cloth, was done by hand. She had her own soft soap, adding salt and resin, sometimes, to produce an article of hard soap that answered a purpose. Occasionally a barrel and "pounder" figured on the program on washing days, when one of the boys would stop from outdoor work to manipulate the pounder. In those days they used the "Armstrong" washer, and sewed with hand machine. Sometimes the cloth would be sent to the clothier's to be dyed and dressed. Not always, for

where was the money to be procured to pay for the work?

Papa Kilbourne built an arch of the freestone lying around so loosely, beside the beautiful spring run. The great iron kettle that had in the spring done service in the sugar bush, over another arch, providing sugar for these frugal people, was set, and the cloth dyed at home. The dye was made of the bark from the roots of the butternut trees that grew profusely all about. Fastening one end to the great reel above arch and kettle, the cloth was smoothly drawn up in a large roll around the reel, then slowly lowered into the seething decoction, thoroughly wetting every part. After steeping for hours, the dye, with the cloth immersed, was permitted to cool for a time, getting thoroughly cold. Mamma K— could do the reeling herself when necessary. The process was repeated again and again as convenience dictated. Occasionally the dye would be renewed. After weeks of heating, steeping, cooling and airing the whole was finally drawn up to cool and drain for the last time. A beautiful, permanent, dark brown, or "butternut" color was the result. When dry, behold the home-made "full cloth" of sixty and one hundred years ago. The uncut nap stood out profusely in little knots, or bunches. Wear and warmth were there, and no "shoddy." It would look odd to-day, but people were accustomed to seeing such at that day. Mrs. Kilbourne cut and made from this garments for husband and sons. Breadths of proper length for boys' pants were cut, and temporarily did service for the little girls as school "mantles," to be worn over the pretty, but heavy, homespun plaids they wore.

A busy, happy home was the Kilbourne cottage when December's blasts arrived, and the inmates gathered about the glowing fireside to await the steaming, viands that had been cooking upon the crane hooks or on the glowing coals upon the hearth. Little do the housekeepers of this day realize what housekeeping in the early years of the present century meant.

ARUAL E. S.

"STUCK UP" PEOPLE AND THOSE WHO THINK THEM SO.

As I am not a farmer's wife I may not be admitted into the Household circle, but shall knock for entrance, as I have a word to say on the above subject.

How often we hear such expressions as these: "She's so stuck up," "She's so high-toned," or "She thinks she's a little better than common folks."

Now, why are these expressions made? Because those who make them instinctively feel that the people about whom the remarks are made are in some way superior to themselves, and the thought is unpleasant, so they try, by sneering and uncomplimentary remarks, to depreciate them in the estimation of others.

Although I am quite sure none of the Household writers are guilty of these things, yet there may be some among the readers who are; for, though, as I said before, I am not a farmer's wife, I have been among them considerable, and think such remarks as the above quoted are more common among them than among their sisters of the city.

So to these I speak: Dear sisters, we never can raise ourselves by lowering others. Let us remember this. If we do not receive the attention we desire from others, let us look to ourselves for the cause and the remedy. Why is it that we look so longingly for a glance or bow, or a few words of recognition from Mrs. So-and-So, or Miss Blank when we meet them, and feel so hurt if we do not receive the notice we wish? Is it not because we feel the attention would be an honor to us? If an honor, then why? Is it not because of the fact that they are our superiors in social standing, and for good reason? If so, let us look at the truth as it is, and, instead of trying to compel recognition by dragging them down to us, let us rather compel it by raising ourselves to their level, and this can never be done by saying, "I am just as good as she is." Oh, no. While that may be true so far as moral qualities are concerned, it undoubtedly is not true of other qualities—qualities also essential to the real lady. "She" may be a woman of ideas beyond the cows and pigs, or even that dear old Plymouth

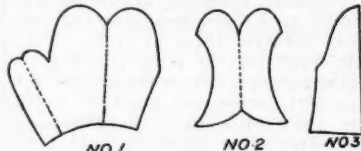
Rock rooster, and these subjects may grow wearisome to her after a while. Then, too, she may possess gentle ways and speak in a low voice, using good language, and may prefer to choose her companions from among those who observe these things also. So if we desire her society, let us fit ourselves for it. There is no reason, in our day, why farmers' wives may not be well informed, at least on good, live topics of general interest; and gentle manners are quite within the range of any one who wills to have them.

There are shams, I know, people who assume to be what they are not, and because of false ideas of life put on airs of superiority which they do not possess. But these need never trouble us at all; they are not worth troubling about. It is worth our while, however, to make of ourselves just all we possibly can, not for social recognition, but to increase our own personal worth, that we may be a help to those about us. And we may rest assured that our enjoyment of life will increase in proportion to our increased capacities, and our increased worth will receive its due reward.

ELIZABETH.

ONE-PIECE MITTEN.

George G. Williams asks for a mitten pattern in one piece. If he or anyone else wishes this pattern it can be had by communicating with me at Madison, O., Box 115.



No. 1 is a diagram of mitten, the dotted lines showing where the pattern is to be folded. The mitten is quickly made; if cut from strong cloth it is serviceable, and if the seams are properly joined it is very well shaped. Cut the lining from Canton flannel a seam smaller all around than the mitten; stitch the seams on the machine and catstitch down smoothly. When the mitten seams are stitched and fastened in the same way, slip in the lining, the seam sides of both together, and fasten at end of thumb and top of hand, and all around at the wrist. Remember in cutting that the pattern must be turned to fit the right and left hand.

No. 2 is a foot and heel pattern for refooting stockings. The writer has tried many patterns and finds this best of all. After sewing the seams of No. 2 place a pattern cut from No. 3 on a stocking, shaping the stocking to it by pulling and stretching; then baste and cut. This pattern cuts away all the thin parts and shortens the length but little. It brings the seam where it is least likely to hurt the foot. The legs will often bear re-footing twice. I use Canton flannel, as it is soft and warm.

SARAH E. WILCOX.

HAS READ "A ROMANCE OF TWO WORLDS."

I noticed in the Household a few weeks since that some one asks for opinions upon Marie Corelli's "Romance of Two Worlds" from those who have read it. I have read it and became greatly interested in it. To me the book is full of beautiful thoughts. We may call much of it imaginary, yet scientific truths have many times been deduced from imaginary premises. Science teaches us that the planet Saturn is a reality. All created things have some utility. Man's work shows thought behind the work. Much more does nature show God's thought. Why could not then the planet be an abode of mortals who have been refined by passing through earth's discipline?

I am a farmer's wife with my own housework to look after. Every person in the same vocation knows what that means. Further I would say that this is my first year of experience as a housekeeper, rather, perhaps, a homekeeper, and I find the Household of inestimable benefit.

I should like to ask some correspondent to contribute for my benefit, a good recipe for bread. My great perplexity is to find some way of making bread that keeps well; mine dries out so soon after baking. I would also like directions for making a soiled-clothes bag, material, style, etc.

I wish to express one more idea and then I will close. That is the benefit and pleasure that comes to a farmer's

wife through the avenue of literature. This reading circle work cannot be too highly recommended. One who has a taste for reading may journey at will, sometimes on the bleak shores of Scotland, again in sunny France, or in the heart of the great metropolis. After my work is done for the day, or rather after the dinner work is done and supper planned I usually find an hour or two for reading, and I invariably feel refreshed thereby after a hard forenoon's work. When you are wearied and inclined to be worried sit down for a time and surrender yourself to the subtle charms of "Enoch Arden." It cannot fail to quiet you and draw your mind from yourself and your trials.

J. E. B.

It is not yet too late to take up the Bay View Reading course. The Household editor's interest in this course increases with each succeeding month. It is with pleasure that it is recommended to all who wish to take a prescribed course of reading at slight expense. John M. Hall, Flint, Mich., will answer all inquiries concerning it.

Quinine in two or three grain doses (for an adult) will, if taken in time, usually break up a cold. This in connection with a quick-acting laxative, a mustard foot bath and hot drinks of some kind will do it if anything will avail. To relieve hoarseness try pouring a pint of boiling water over a teaspoonful of tar and inhaling the steam through a paper funnel. Powdered bismuth used as a snuff every few hours is good to check profuse watery discharges from the nostrils, which frequently is so disagreeable an accompaniment to a cold in the head.

In frying sausages do not prick with a fork; fry slowly and they will not burst open.

TUMOR EXPELLED.

Unqualified Success of Lydia E. Pinkham's Vegetable Compound.

Mrs. ELIZABETH WHELOCK, Magnolia, Iowa, in the following letter describes her recovery from a very critical condition:

"DEAR MRS. PINKHAM:—I have been taking your Vegetable Compound, and

am now ready to sound its praises. It has done wonders for me in relieving me of a tumor. My health has been poor for three years. Change of life was working upon me. I was very much bloated and was a burden to myself. Was troubled with smothering spells, also palpitation of the heart and that bearing-down feeling, and could not be on my feet much. I was growing worse all the time, until I took your medicine. After taking three boxes of Lydia E. Pinkham's Vegetable Compound Lozenges, the tumor passed from me. My health has been better ever since, can now walk quite a distance and am troubled no more with palpitation of the heart or bloating. I recommend your medicine to all sufferers from female troubles."

It is hardly reasonable to suppose that any one can doubt the efficiency of Mrs. Pinkham's methods and medicine in the face of the tremendous volume of testimony.

"I was growing worse all the time, until I took your medicine."

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The INVINCIBLE is a class by itself. By odds the most effective, durable and convenient Washer ever produced. It is to the washboard what a sewing machine is to a common needle. Much valuable information on cleaning for the asking. Address: GEO. W. SWEET, Flint, Mich.

HIGHEST GRADE SEWING MACHINE \$5.00 on easy terms and conditions. Retail at \$40.00 everywhere. For full particulars and Big Sewing Machine Catalogue FREE cut this ad. out and send to SEARS, ROEBUCK & CO. (INC.) Cheapest Supply House on Earth, CHICAGO, ILL.

MOTHERS Your Children cured of Bed-wetting. Sample free. Dr. F. E. MAY, Bloomington, Ill.

SHORT STOPS.

H. M. D. writes: I have been an interested reader of the Household for years and enjoy the letters and recipes, but confess Mrs. J. E. English's recipe for graham gems rather took my breath away. She says, "Take one quart sweet milk and four cups good graham flour well stirred together. Simply this, and nothing more. Have cast-iron gem pans hot and well greased; fill full, put in a hot oven, bake till brown." They are just delicious. Now, I am very fond of "gems of the first water," but always put a little salt in mine, and want to suggest one thing which Sister English forgot to mention: That every woman who tries that recipe have her soap-stone good and hot and just before those gems rise high enough to shove the top off of the oven, drop the soap-stone gently over the gem pan. Nothing else will save the stove.

E. C. Y. writes: Come, Omega, and let us reason together. If you will look in the preface of "A Romance of Two Worlds," you will see the author's statement in regard to our Lord and Savior Jesus Christ, and then if you will read John I., chap. II., v. 2, and the 53rd chapter of Isaiah, you will find God says it pleased him to bruise him, and that by his stripes we are healed. Within the Bible none other thing is said but there must be a sacrifice without spot or blemish. From the time when God first commanded the sacrifice of sheep and goats for sin, until Jesus came and offered himself, once for all, there was among his chosen people an observance of this divine ordinance. For without the shedding of blood there is no remission of sin. When Peter advanced the same ideas found in the preface of the volume in question, Jesus said, Get thee behind me Satan; thou sayest the things of man, and not of God (Matthew 16, 22-23), and by looking up the references abundance of testimony covering the subject may be found which I have no space to write here. There is no use trying to be more wise than God, and none can be more merciful, and when from Genesis to Revelation one can find nothing else but redemption's story, you have no need to look further for an opinion of the book you speak of.

FOR THE DINNER PAIL.

The Michigan Farmer has been a weekly visitor at our home for ten years or more, and I have often thought I would write a short article and send to the Household department and express my appreciation of the good, helpful letters, if not able to write anything of any special help to others. So out comes pen and paper for my first, and probably last, attempt.

I particularly enjoyed that "Chat" which gave us a peep at our editor's home life (Jan. 8). I, too, have a considerate husband, as he does not find fault with his meals and has never once told me what a good cook his mother was, so I draw the conclusion that either I am as good a cook or else he thinks I am too contrary or stupid to change my ways—the former, I hope.

Bessie S. asks what to put up for dinners for four men. Perhaps I can help her, as I have two school teachers to put up lunches for, and teachers are not unlike other laborers, that is, something good and appetizing suits them. Thinly sliced bread, spread with butter and potted ham (which is bought in a small tin can) make excellent sandwiches. Or, cook a chicken tender and chop the meat fine and season well and use in place of the ham. Baked beans are also liked. Put in small bottle of vinegar and a spoon or fork to eat the beans with. Any two-crusted pie if not too juicy will carry well. If you put in cucumber pickles wrap them in a cloth or in a paper without any printing on it, as the ink makes them taste badly, and, too, this is unwholesome. Cookies, cake, boiled eggs, cheese, celery, apples, in fact, anything and everything so that your men have a variety, for nowhere is the saying "Variety is the spice of life" so applicable as in the food that we eat. We can hear the doxology sung in church every Sunday all our lives, and hear the minister petition for every condition of mankind, from the rulers of our country down to the babies, but for our 14 or 20 meals a week let us have a variety. Think of the different kinds of bread, pastry, etc., that can be made from wheat, buckwheat and corn! Surely no one

need spend much time in planning a meal to have a variety, and it is necessary that we have different kinds of food that our bodies may be properly nourished. If this is not put under the table, I will call again next year.

MRS. SAM.
(Please do not wait so long as that. Make it next month instead.—Ed.)

SOUP MAKING.

Always use clear cold water for making soup, and always proportion the quantity of water to that of the meat. Somewhat less than a quart of water to each pound of meat is a good rule for common soups. Rich soups may have a still smaller allowance.

Soup should always be made of entirely fresh meat that has not been previously cooked. An exception to this rule may sometimes be made in favor of the remains of a piece of roast beef that has been very much under-done in roasting. This may be added to a piece of raw meat. Soup made of cold cooked meat has always a rapid, disagreeable taste, very perceptible through all the seasoning. Also, it will be of a bad color. The juices of the meat having been drawn out by the first cooking renders it unfit and unpalatable for soup. There is no nutriment to be derived from soup made with cold meat.

Soup made of raw meat is frequently better the second day than the first. Do not replenish the soup pot, for additional water will not improve the soup. Every particle of fat should be carefully skimmed from the surface. Greasy soup is unwholesome. Lean meat is much better for soup than fat meat. Long and slow boiling is necessary to extract the strength from the meat. If boiled fast over a large fire, the meat becomes hard and tough, and will not give out its juices.

The cook should season the soup very slightly with salt and pepper. If too much is used it may spoil it for the taste of most of those that are to eat it, but if too little it is easy to add more, to your own taste. The practice of thickening soup by stirring flour into it is not a good one, as it spoils the appearance and taste. If made with a sufficient quantity of good fresh meat, and not too much water, and if boiled long and slowly, it will have substance enough without flour.

GOOD BEEF SOUP.

Take a shin of good, fresh beef (the fore leg is best, as there is the most meat on it). Cut it into three pieces, and wash it well. To each pound allow somewhat less than a quart of cold water. Put it into a large pot and add one heaping teaspoonful of salt. Put it over a good fire and cook it slowly between four and five hours. When it comes to a steady boil, and the scum has risen, skim it well. Keep the pot closely covered and keep it simmering steadily; continue a regular heat. When cooked pour it into a tureen and send to table closely covered.

If you wish to send the meat to table, take the best part of it out of the soup about half an hour before dinner. Have ready a stew kettle with a cupful of canned tomatoes; moisten them with half a cupful of the soup and season. When the tomatoes are warmed through put the meat in on them, and let it brown till dinner time. Keep the pot covered; it will brown quicker; then send it to table on a dish by itself. Let the remainder of the meat be left in the soup until ready to serve, then pour the soup from it. Next day take what is left of the soup and warm it. If it has been well made and kept in a cool place, it will be found better the second day than the first.

CLEAR GRAVY SOUP.

Having well buttered the inside of a stew kettle, cut half a pound of ham into small slices and lay them at the bottom, with three pounds of the lean of fresh beef, and as much veal, cut from the bones, which you must afterward break to pieces and lay on the meat. Cover the pot closely, and set it over a quick fire. When the meat begins to stick to the kettle, turn it; and when it is a nice brown at the bottom, cover the meat with cold water. Watch it well, and when it is just coming to a boil put in half a pint of cold water. This will make the scum rise. Skim it carefully, and then pour in another pint of cold water and skim it again. In the meantime prepare the vegetables; peel three large white onions and slice them;

pare two small white turnips and slice them also; wash clean and cut into small pieces two small carrots and two heads of celery. If you cannot get fresh celery, substitute a large tablespoonful of celery seed tied up in a bit of white muslin. Put the vegetables into the soup and then place the kettle over the fire where the heat is not so great as before. Let it boil gently for four hours. Then strain the soup through a thin muslin into a large stone jar, but do not squeeze the cloth or the soup will look dark instead of clear. Strain quickly as possible, so as not to cool the soup.

BAKED BEEF.

This is a plain family dish. Take a nice piece of lean fresh beef. Wash it, rub lightly with a little salt, and place it on two bits of sticks crossed middle way of a deep iron stew kettle. Put a little water in the bottom and place under and around the beef half a dozen pared potatoes cut in halves. Put this into a hot oven and let it bake till well done, basting it often with its own gravy. Then put it into a hot dish and serve the potatoes in another. Skim the gravy and send to table hot.

BAKED BEEF WITH YORKSHIRE PUDDING.
Prepare the beef as given above, but leave out the potatoes. To make the pudding, stir gradually four heaping tablespoonfuls of flour into one pint of sweet milk, adding a saltspoonful of salt. Beat two eggs very light, and mix them with the milk and flour. Have the batter smooth. Do not put this pudding under the beef at first, for if baked too long it will be hard

and solid. After the beef has baked half an hour put in the batter; spread it over the bottom of kettle, and after it has nicely browned on the top cut it in four pieces and turn over, first loosening it around the edges so as not to break it. It will require about two hours to bake. When the beef is served, lay pieces of pudding around it, to be eaten with the meat. Serve the whole very hot.

CLARA.

CONTRIBUTED RECIPES.

Spice cake: One cup brown sugar, one-half cup molasses, on teaspoonful soda in a little hot water, one-half cup thick sour cream, three and one-half cups flour, one teaspoonful of cinnamon and allspice mixed, one pound raisins stoned and floured, added last.

E. T. A.
Coffee cake: One-half cup butter, one bit; his butter ought to spoil, the molasses, one-half cup cold coffee, one teaspoonful soda dissolved in the coffee, one teaspoonful each of cloves, cinnamon and nutmeg.

EVALINE.

A number of communications are unavoidably crowded out of this issue, among them one with the title, "How to Train a Husband," which we are sure will be read with much interest. These will appear in our next week's Household.

Dark prints and muslins are best stiffened with gum arabic. If starch is used make it dark with bluing, and turn the garment wrong side out before immersing.

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STOVE POLISH
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Little Labor
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Legal Department.

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It is Folly to Sow When You May Not Reap.—E. I. A., South Lyon, Mich.—A rents B his farm on shares three years ago the first of April next. B has a quantity of wheat on the ground. His lease expires April 1st, 1898. Can he harvest the wheat? How will he get his share?—The right to enter and harvest a crop after one ceases to occupy is accorded only to tenants whose tenancy is uncertain, for it is folly to sow what one cannot reap. B will have no rights in the property after April 1st, unless secured to him by the terms of his lease.

Way of Necessity Exists Only While the Necessity Continues.—Subscriber, Fowler, Mich.—A owns 40 acres 80 rods from the road. He applied for road and one was laid out two rods wide, from B's forty lying between his land and the road. After twenty-five years the owner of the front forty acres buys the back forty. What course must be taken to discontinue said road? Can anyone prevent its being taken up?—The road was laid out as a way of necessity. A way of necessity continues while the necessity remains, but when the necessity is removed the right of way is thereby extinguished. The present owner may close the way and use it as he pleases.

When Foreclosure May be Commenced for Non-Payment of Interest.—J. H., Salem, Mich.—A gave a mortgage to B, payable in five years in sums of any amount, at any time, or the whole sum at the end of five years, with 6 per cent interest, payable annually. A fails to pay the whole amount of interest. Can B foreclose and sell before the end of five years?—Mortgages generally contain a clause stipulating that upon the failure to pay interest when it becomes due the mortgagee may declare the whole principal to be due and payable in thirty days. In the absence of any stipulation as to the time within which foreclosure proceedings may be commenced, a foreclosure may be had any time after interest, or any specified payment of interest or principal, is in arrears.

Telephone Poles in Highway—Damages—Statute Favors Incorporated Companies.—B. J. P., Okemos, Mich.—To whom would you apply for right of way to set telephone and telegraph poles in the public highway? Could the owner of the land prevent the setting of such poles or dictate the place where they should be set?—Any person may construct telegraph or telephone lines and set poles in the public highways; but, except in the case of incorporated companies, it is necessary to first secure the land-owner's consent. An incorporated telegraph or telephone company is authorized to construct such lines regardless of the consent of the owner, but the lines and poles must not encroach upon the public use of highways, nor is such company allowed to injure or deface any tree or shrub along the highway which may have been there planted or left for shade or ornament. If any person on whose land poles are set feels himself damaged thereby, on application the Circuit Court will appoint three disinterested commissioners, whose duty is to make an appraisal of any damage sustained by the applicant. Their report will then be argued before the court, and if it be confirmed the company must pay the amount with costs.

The Markets.

WHEAT.

After a week of high prices and strong values, wheat has started downward, dropping to 96½c for No. 2 red, and 96c for No. 1 white. It is believed that Letter will allow the market to decline to a point which will make him a good profit when he pushes up prices again. It may drop several cents, but will undoubtedly advance again. Chicago keeps about 6c higher than Detroit on No. 2 red spot and May futures. The result of the Maine investigation may push prices up suddenly.

The following table exhibits the daily closing sales of spot wheat in this market from February 1 to February 24 inclusive.

	No. 1	No. 2	No. 3
	White.	Red.	Red.
Feb. 1.....	95	95	91½
" 2.....	94½	94½	90½
" 3.....	93½	93½	90½
" 4.....	94	94	90½
" 5.....	93½	93½	90½
" 6.....	94	94	90½
" 7.....	94½	94½	91
" 8.....	94½	94½	91½
" 9.....	94½	94½	91½
" 10.....	95	95	92
" 11.....	95½	95½	92
" 12.....	95½	95½	92
" 13.....	95½	95½	92½
" 14.....	97	97½	93½
" 15.....	97	97½	93½
" 16.....	96½	96½	93
" 17.....	97½	97½	95½
" 18.....	98½	98½	95½
" 19.....	98½	98½	95½
" 20.....	98½	98½	95½
" 21.....	97	98	94½
" 22.....	96	96½	93½
" 23.....	97	98	94½
" 24.....	96	96½	93½

The following is a record of the closing prices on the various deals in futures each day during the week:

	May.	July.
Friday.....	97	88
Saturday.....	98½	91½
Monday.....	99½	92
Tuesday.....	98½	90½
Wednesday.....	98½	90½
Thursday.....	97½	88

The visible supply of wheat on Saturday last in the United States and Canada was 35,433,000 bu, as compared with 35,634,000 bu the previous week, and 45,215,000 bu at the corresponding date last year. The decrease for the week was 201,000.

Argentine shipments of wheat last week to Liverpool, 256,000 bu.; for orders, 520,000 bu.; to continent, 520,000 bu.; total, 1,296,000 bu., compared with 144,000 bu. to Liver-

pool, 368,000 bu. for orders, and 224,000 bu. to the continent last week, a total of 736,000 bu. Last year shipments were 24,000 bu. to Liverpool, 123,000 bu. for orders and 8,000 bu. to the continent. Argentine has shipped 4,174,000 bu. to Europe since January 1, compared with 364,000 bu. last year.

In Manitoba and the west there is only a moderate quantity of wheat in farmers' hands, perhaps 2,000,000 bu. to market. Good prices, good weather and brisk trade rushed the big end of the crop eastward in October, November and December. Had it not been that Ontario had a very large and fine (unusually large and fine) crop of winter wheat last year, which keeps going into millers' hands at 20c. to 25c. a bu less than they can get Manitoba No. 1 hard, the latter to-day would be worth \$1 per bu. to the farmer. At present it is worth 35c. afloat at Port William for cash.

Considering the short supply of wheat in Europe and the small quantity available in this country for shipment, prices remain quite moderate. This is more especially noticeable in view of the fact that the surplus is said to be tied up in the hands of a combination to control it for the highest figures to be obtained. Of course the low prices at which other grains may be substituted remove any fears of serious results, for rye, corn and other cereals are plentiful and cheap the world over. Europe does not hesitate to face the situation even at most with a few weeks' supply in store.—Minneapolis Market Record.—The above paragraph is not altogether correct. The European rye crop, especially in parts of Germany and Russia, was not a good one, in fact in some portions it was a failure. Then corn is advancing, and potatoes are high. The Record knows that dear potatoes means an extra consumption of wheat. The determining factors in fixing prices in wheat will be the amount Argentine can spare, and how the crop shows up in the spring. We think the market favors a continuance of at least the present range of values.

Broomhall reports the following shipments of wheat last week from exporting countries: America, 4,302,000 bu.; Russia, 2,030,000 bu.; Roumania, 532,000 bu.; Argentina, 1,286,000 bu.; various countries, 570,000 bu. The destination was United Kingdom, 3,518,000 bu.; France, 1,132,000 bu.; Belgium, 976,000 bu.; Holland, 755,000 bu.; Germany, 240,000 bu.; Italy, 688,000 bu.; Scandinavia, 96,000 bu.; Austria, 264,000 bu.; Portugal, 64,000 bu.; various countries, 656,000 bu.

The shipments of wheat from Tacoma up to February 15 reached 6,200,000 bu., valued at \$4,400,000, carried in fifty vessels. It is estimated that 2,500,000 bu. to 3,000,000 bu. of wheat remains in Washington for shipment.

DAIRY PRODUCTS.

BUTTER.

Receipts in the local market continue liberal but values have held steady, and both choice creamery and dairy may be quoted firm at the current range of prices. Fancy dairy shows some improvement since a week ago. Quotations range as follows: Creamery, good to choice, 18½c to 20c; fancy dairy, 15½c to 16c; fair to good, 12½c to 14c; low grade stock, 9½c to 10c. Considerable quantities of both creamery and dairy go to private consumers at 3½c per lb. above these quotations. At Chicago the market is not at all active, even on the best grades, but values are generally higher than at date of last report. The weather was against the market during the early part of the week, and the feeling in the trade is expected to improve when the weather becomes more settled. As a rule, however, higher values are not expected. Quotations in that market on Thursday were as follows: Creameries, extras, 19½c; firsts, 17½c to 18c; seconds, 12½c to 15c. Dairies, extra, 17c; firsts, 13½c to 15c; seconds, 12c. Ladies, extra, 12½c to 13c. Packing stock, 10½c to 10¾c; roll butter, 11½c to 11¾c. At New York the market is quoted firm, but with no improvement in prices. Western creamery is quoted there at 14½c to 15c; Elgin creamery, 20c; factory, 11½c to 14c. Receipts are ample to meet the demand, and the trade does not look for any change in values at present.

CHEESE.

There is very little to be said of the cheese market. It drags along without any features of interest. Prices are nominally unchanged in this market, the range being 10½c to 11c for full creams. But little stock is moving in jobbing circles, and the consumptive demand appears to be limited. At Chicago but little is doing this week, partially on account of the stormy weather. Values show little change. Quotations on Thursday were as follows: Young Americas, 7½c to 9½c; twins, 7½c to 8½c; cheddars, 7½c to 8½c; Swiss, 10c to 11½c; limburger, 7½c to 8½c; brick, 8½c to 10c. The New York market is very quiet at present, the export demand being limited. Receipts are fully up to requirements. Some special factories are realizing 8½c to 9c for large sizes and 9c for small, but a good deal of stock sells below those figures. Quotations on Thursday were as follows: State, full cream, large, fancy, 8½c; do, fair, 8c; do, choice, October, 8c to 8½c; do, fair to good, 7½c to 7¾c; do, common, 6½c to 7c; do, colored or white, small, fancy, September, 8½c to 9c; do, choice October, 8½c to 9c; do, common to good, 7½c to 8c; light skims, small, choice, 4½c to 5c; do, large, choice, 6½c to 7c; part skims, small, choice, 6c; do, large, choice, 5½c; do, good to prime, 4½c to 5c; do, common to fair, 3½c to 4c; full skims, 2½c to 3c.

Latest cables from Liverpool quote the best full cream American cheese, both white and colored, at 40s. per cwt. of 112 lbs., as compared with 41s. a week ago. These are extremely low figures for this season of the year.

BALED HAY.

Detroit.—Best timothy, in car lots, \$3; No. 2, \$7.50. Rye straw, \$5 per ton; oat straw, \$4; wheat straw, \$4. The advance in corn and oats, and the stronger feeling in bran and middlings, will probably strengthen the hay market.

Chicago.—The market is reported quiet and easy at the following range of prices: Choice timothy, \$3.50 to \$3.90; No. 1 timothy, \$3.00 to \$3.50; No. 2 timothy, \$2.00 to \$2.50; choice upland prairie, \$7.50 to \$8.00; No. 1 upland prairie, \$6.50 to \$7.00; No. 1 Illinois and Indiana prairie, \$5.50 to \$6.00; No. 2 Illinois and Indiana prairie, \$5.00 to \$5.50.

Buffalo.—There is a fairly good demand

for the better grades, but the lower grades are dull and weak. Quotations are as follows: Hay, timothy, baled, choice, per ton, \$3.50 to \$4.00; hay, timothy, baled, No. 1, per ton, \$3.50 to \$4.00; hay, timothy, No. 2, per ton, \$3.00 to \$3.50; hay, timothy, No. 3, per ton, \$2.50 to \$3.00; hay, clover, No. 1, baled, per ton, \$5.00 to \$6.00.

New York.—Choice timothy is meeting with a fair export demand, but other grades are slow and dull. Quotations are as follows: Prime timothy, \$15; No. 1, \$13.00 to \$14.00; No. 2, \$11.00 to \$12.00; No. 3, \$8.50 to \$9.00; clover, \$6.00 to \$7.00; clover mixed, \$9.00 to \$10.00. Straw—Large rye, No. 1, \$10.00; No. 2, \$8.00 to \$9.00; oat, \$7.00 to \$8.00.

DETROIT PRODUCE MARKET.

Detroit, February 24, 1898.

FLOUR.—Quotations on jobbers' lots in barrels are as follows:
Straights.....\$4.75
Clear.....4.50
Patent Michigan.....3.25
Low Grade.....3.50
Rye.....3.25
Buckwheat.....3.75
Granulated Corn Meal.....2.00

CORN.—The visible supply of this grain on Saturday in the United States and Canada was 39,907,000 bu., as compared with 35,572,000 bu. the previous week, and 26,473,000 bu. at the corresponding date in 1897. Quotations in this market are as follows: No. 2, 3c; No. 3, 3c; No. 2 yellow, 3½c; No. 3 yellow, 3¼c per bu.

OATS.—The visible supply of this grain in the United States and Canada on Saturday last was 13,346,000 bu., as compared with 14,012,000 bu. the previous week, and 13,565,000 bu. at the corresponding date in 1897. Quotations are as follows: No. 2 white, 3½c; No. 3 white, 3½c; No. 3 for March delivery, 3½c per bu.

RYE.—The visible supply of this grain in the United States and Canada on Saturday last was 3,632,000 bu. as compared with 3,948,000 bu. the previous week, and 3,726,000 bu. at the corresponding date in 1897. No. 2 quoted at 52½c per bu.

BARLEY.—Quoted at 75c per cwt for State.

FEED.—Jobbing quotations on carload lots are as follows: Bran and coarse middlings, \$13; fine middlings, \$14; cracked corn, \$12; coarse cornmeal, \$12; corn and oat chop, \$11 per bushel.

TIMOTHY SEED.—Selling at \$1.25 per bushel.

CLOVER SEED.—Prime sold Thursday at \$3.10 per bu for spot, and March at same figures. No. 2, \$2.85 to \$2.95 per bu. Alsike, \$3.25 to \$4.00 per bu.

BUTTER.—The market is stronger, especially on fine creamery and the best dairy. Receipts are quite large, but the bulk is only of ordinary quality. Quotations are as follows: Creamery, 18½c to 20c; fancy dairy, 15½c to 16c; good dairy, 12½c to 14c; low grades, 9½c to 10c per lb.

CHEESE.—Quoted at 10½c for full cream. Market dull and weak.

TALLOW.—Quoted at 3¼c to 3½c per lb.

RUTABAGAS.—Quoted at 25c to 30c per bu.

CABBAGE.—Quoted at \$3.50 per hundred.

POULTRY.—Dressed quoted as follows: Chickens, 9c per lb.; turkeys, 12c; geese, 8½c; ducks, 9c. Live quoted at 10c to 12c below these prices. Market active and firm.

EGGS.—Fresh receipts are quoted at 15c to 15½c per doz.

DRIED FRUITS.—Evaporated apples, 8½c to 9c; evaporated peaches, 10c to 12c; dried apples, 5½c to 6c per lb.

APPLES.—Quoted as follows: Fair, \$2.25 per bbl; good, \$2.75 to \$3.25; choice, \$3.50 to \$4.00.

HONEY.—Quoted at 10c to 13c per lb for ordinary to best.

BEANS.—Quoted at 8c to 8½c per bu for city hand-picked. Market quiet.

POTATOES.—Quoted at 65c to 70c per bu in car lots, and 70c to 75c from store. At Chicago common to choice are quoted at 52c to 64c per bu.

ONIONS.—Firm and higher. Now quoted at 90c per bu.

DRESSED HOGS.—Quoted at \$4.25 to \$4.50 for heavy, and \$4.75 to \$5.00 for good light butchers.

PROVISIONS.—Pork products generally higher. Latest quotations are as follows: Mess pork, \$11.25 per bbl; short cut mess, \$11.25; short clear, \$10.75; compound lard, 4½c; family lard, 5½c; kettle lard, 6½c; smoked hams, 8½c to 9c; bacon, 8½c to 9c; shoulders, 5½c; picnic hams, 6c; extra mess beef, \$8.75; plate beef, \$9.25.

HIDES.—Latest quotations are as follows: No. 1 green, 5½c; No. 2 green, 7½c; No. 1 cured, 9½c; No. 2 cured, 8½c; No. 1 green calf, 13½c; No. 2 green calf, 12c; No. 1 kip, 11c; No. 2 kip, 9c; sheepskins, as to wool, 90c to \$1.25; shearings, 30c to 40c.

OILS.—Lined and lard oils are firm. Latest quotations are as follows: Raw linseed, 42c; boiled linseed, 44c per gal. less 1c for cash in ten days; extra lard oil, 42c; No. 1 lard oil, 32c; water white kerosene, 8½c; fancy grade, 11½c; deodorized stove gasoline, 7½c; turpentine, 40c per gal in bbl lots; in less quantities, 45c to 47c per gal.

COFFEE.—Revised quotations are as follows: Roasted Rio, ordinary, 9c, fair 11c; Santos, good 14c, choice 18c; Maracaibo, 20c to 25c; Java, 25c to 30c; Mocha, 25c to 32c.

HARDWARE.—Latest quotations are as follows: Wire nails, \$1.70; steel cut nails, \$1.65 per cwt, new card; axes, single bit, bronze, \$5; double bit, bronze, \$3.50; single bit, solid steel, \$6; double bit, solid steel, \$9.50 per cwt; bar iron, \$1.40; carriage bolts, 75 per cwt off list; tire bolts, 70 and 10 per cent off list; painted barbed wire, \$1.70; galvanized do, \$2 per cwt; single and double strength glass, \$5 and 5 per cent off new list; sheet iron, No. 24, \$2.50 per cwt; galvanized, 75 and 10 per cent off list; No. 9 annealed wire, \$1.50 rates.

DETROIT LIVE STOCK MARKET.
Michigan Central Stock Yards.

Friday, February 18, 1898.

CATTLE.

Receipts, Friday, 316; one week ago, 454. Market active; all sold early at about yesterday's prices, closing steady. \$4.40 was top price to-day for 4 steers av 1195 lbs., \$4.35 for 10 av 1233 lbs., and \$4.10 for 27 feeders av 812; balance as quoted. Veal calves—Receipts, 45; active; a few choice brought \$6.50, bulk at \$5.75 to \$6.25. Milch cows and springers unchanged.

Roberts & Spencer sold Caplis & Co 4 good butcher steers av 1195 at \$4.40, 6

mixed butchers av 908 at \$3.40, 4 cows av 932 at \$2.90, and a cow to Kammen weighing 770 at \$2.65.

Leach sold Sullivan 10 feeders av 774 at \$3.85, 5 steers to Judson av 818 at \$3.85, a bull weighing 1450 at \$3.50, and 2 cows av 1050 at \$3.25.

Shook sold Regan a cow weighing 1900 at \$3.00.

Kalahan sold Sullivan 6 feeders av 813 at \$3.90, and 5 mixed butchers to Caplis & Co av 902 at \$3.10.

Stabler sold Judson 3 steers av 1250 at \$4.25.

A Simmons sold Mich Beef Co 10 steers av 1233 at \$4.35, and 6 do av 1030 at \$4.00.

Armstrong sold Caplis & Co 7 steers and heifers av 893 at \$3.95, and 5 mixed butchers av 1148 at \$3.50.

Cassey sold Mich Beef Co 5 mixed butchers av 1066 at \$3.25, 4 do av 1267 at \$3.50, and 12 do av 993 at \$3.50.

Jedeled sold Black 2 heifers av 1110 at \$3.55.

Hyman sold Regan 6 mixed butchers av 721 at \$3.65, 3 do av 563 at \$3.25, and a cow weighing 950 at \$2.50; also 2 stockers to Sullivan av 640 at \$3.75.

Spicer & M sold Mich Beef Co 6 mixed butchers av 1150 at \$3.15, 2 cows av 1055 at \$3.15, 2 do av 1100 at \$2.50, and 1 do weighing 870 at \$3.15.

Hyman sold Mich Beef Co 13 steers av 1063 at \$4.20.

Fox & Bishop sold Caplis & Co 2 cows av 1035 at \$3.10.

Prucha sold Sullivan 4 feeders av 815 at \$3.90.

H H Howe sold same 7 steers and heifers av 935 at \$4.00, 4 mixed butchers av 1112 at \$3.60, and a bull weighing 1790 at \$3.60.

Weeks sold Russell 11 steers av 960 at \$4.00, 3 heifers av 733 at \$3.75, and 4 feeders to Sullivan av 880 at \$3.50.

Hertler sold Sullivan 4 steers av 1197 at \$4.30, and 2 do av 965 at \$4.00.

Younger & Moore sold Regan 5 mixed butchers av 620 at \$3.10, 26 steers and heifers to Sullivan av 779 at \$3.75, and 2 oxen av 1350 at \$3.25.

Eddy sold same 11 steers av 1100 at \$4.30, a bull weighing 1580 at \$3.45, and 5 mixed butchers to Kammen av 946 at \$3.25.

Chase sold J C Day 27 feeders av 812 at \$4.10.

SHEEP AND LAMBS.

Receipts Friday, 805; one week ago, 723. Market fairly active. Lambs weak to 5c lower than above quotations, balance as noted.

Spicer & M sold Russell 18 lambs av 63 at \$5.25 and 11 do to Hiser av \$7 at \$5.35.

Howe sold same 11 lambs av \$1 at \$5.50.

Roberts & S sold Robinson, 26 lambs av \$8 at \$5.50.

Simmons sold same 18 lambs av \$3 at \$5.55.

Feener sold Monaghan 51 lambs av \$3 at \$5.25 and 3 sheep av 143 at \$4.00.

D B Sutton sold Mich Beef Co 140 lambs av \$3 at \$5.50 and 12 mixed av \$0 at \$4.25.

Shelton sold Hammond, S & Co 49 lambs av \$7 at \$5.35.

Judson sold same 79 mixed av 79 at \$3.50, 200 lambs to Sutton av \$1 at \$5.40 and 94 mixed av \$5 at \$4.40.

McMullen sold Fitzpatrick 12 lambs av \$8 at \$5.50.

Horner sold Sullivan 89 lambs av \$9 at \$5.52½.

Fox & Bishop sold Monaghan 15 lambs av \$5 at \$5.40.

Moore sold Fitzpatrick 31 lambs av \$2 at \$5.50.

HOGS.

Receipts Friday, 1,734; one week ago, 2,810. There is no change to note in quality. Market active; all sold early at prices averaging 2½ to 5c higher. Good mediums, \$4.05 to \$4.10; yorkers, \$4.00 to \$4.05; pigs, \$3.65 to \$3.75.

Spicer & Merritt sold Clark 11 av 236 at \$4.10.

Simmons sold Sullivan 39 av 152 at \$4.02½.

F. W. Horner sold same 10 av 127 at \$4.02.

Kalahan sold same 41 av 116 at \$3.75.

Jedeled sold same 85 av 158 at \$4.00.

Spicer & M sold same 63 av 182 at \$4.05.

Roe & Holmes sold Kandle 10 pigs av 67 at \$3.90.

Hauser sold Parker, Webb & Co 91 av 164 at \$4.10.

Spicer & M sold same 37 av 218 at \$4.10.

J Stephens sold Sullivan 2 steers av 765 at \$4.00 and a cow to Black weighing 1240 at \$3.40.

G H Mayer sold Sullivan 14 steers av 993 at \$4.00, a bull weighing 1850 at \$3.65, 2 do av 1280 at \$3.30; 2 heifers to Black av 750 at \$4.00 and 4 cows av 1012 at \$3.10.

Law sold Sullivan 6 steers and heifers av 966 at \$4.00.

Roulador sold Mich Beef Co 3 bulls av 950 at \$3.25.

Reed sold Caplis & Co 5 steers and heifers av 1058 at \$4.00.

Ackley sold Caplis & Co 9 mixed butchers av 936 at \$3.50, a steer weighing 660 at \$3.50 and 11 do av 1,090 at \$4.20.

Belhimer & Co sold Mich Beef Co 8 steers and heifers av 856 at \$4.00 and a cow to Caplis & Co weighing 950 at \$2.75.

Watson sold Marx 7 mixed butchers av 565 at \$3.60 and a bull weighing 1,290 at \$3.30.

Patrick & P sold Magee 3 cows av 1,116 at \$3, 2 oxen to Sullivan av 1,665 at \$3.35 and 7 mixed butchers to Caplis & Co av 785 at \$3.75.

Horne & R sold Magee 3 cows av 1,090 at \$3.30, 5 steers and heifers to Mich Beef Co av 570 at \$4.10 and a bull to Kammen weighing 1,000 av \$3.60.

Roulador sold Caplis & Co 13 mixed butchers av 704 at \$3.75, 6 do av 1,110 av \$3.40 and 3 cows av 1,111 at \$3.

Estep sold Mich Beef Co 37 steers av 960 at \$4.15.

Joe McMullen sold Fitzpatrick 7 mixed butchers av 745 at \$3.60, 39 stockers to Mich Beef Co av 541 at \$4 and 7 mixed stockers av 443 at \$3.25.

SHEEP AND LAMBS.

Receipts Thursday, 1,683; one week ago, 1,721. There is no change to note in quality. Market active; all sold early at about last Friday's prices. Range of prices: Good lambs, \$5.40 to \$5.55; light to good, \$4.85 to \$5.35; good mixed lots, \$4.50 to \$4.75; fair to good mixed butchers, \$3.75 to \$4.50; culls and common, \$3.00 to \$3.65.

Kalahar sold Fitzpatrick 26 lambs av 68 at \$5.00 and 8 bulls av 71 at \$3.00.

Murphy sold Mich Beef Co 81 lambs av 95 at \$5.50, 15 mixed to Sullivan Beef Co av 97 at \$4.30 and 5 common av 138 at \$3.50.

G H Meyer sold Sullivan Beef Co 25 lambs av 93 at \$5.55.

Bergen sold Mich Beef Co 218 lambs av 97 at \$5.50 and 15 sheep av 100 at \$4.50.

E O Knapp sold Heiser 9 lambs av 106 at \$5.50, 3 sheep av 113 at \$4.25 and 2 do av 170 at \$3.50.

Nott sold Fitzpatrick 17 lambs av 86 at \$5.40.

Stephens sold Mich Beef Co 43 lambs av 81 at \$5.40 and 3 sheep av 130 at \$3.50.

Allen sold Hammond, S & Co 31 lambs av 137 at \$5.40.

Ackley sold Mich Beef Co 53 lambs av 89 at \$5.50.

Kelsey sold same 23 lambs av 67 at \$5.00 and 5 culls av 64 at \$3.00.

Roe & Holmes sold Monaghan 105 lambs av 68 at \$5.30 and 2 sheep av 80 at \$3.50.

McHugh sold Mich Beef Co 114 lambs av 92 at \$5.50.

Spicer & M sold same 33 lambs av 88 at \$5.50.

Allen sold Sutton 53 lambs av 106 at \$5.40 and 98 lambs av 96 at \$5.45.

Howe sold same 75 lambs av 86 at \$5.45 and 20 lambs to Sullivan Beef Co av 59 at \$5.00.

Rook sold Mich Beef Co 23 lambs av 84 at \$5.50 and 21 mixed av 80 at \$3.75.

Watson sold Hammond, S & Co 30 mixed av 99 at \$4.55.

Roe & Holmes sold Robinson 75 mixed av 83 at \$4.60.

Sprague sold Sutton 28 lambs av 88 at \$5.45.

Roe & Holmes sold same 70 lambs av 83 at \$5.45 and 4 do av 60 at \$5.00.

Same sold same 50 lambs av 72 at \$5.00.

Reason sold Fitzpatrick 104 lambs av 76 at \$5.00.

Bunnell sold Sullivan Beef Co 16 lambs av 80 at \$5.50.

Ackley sold same 14 mixed av 92 at \$4.00.

Lewis sold Mich Beef Co 62 lambs av 73 at \$5.40.

Astley sold Young 28 lambs av 93 at \$5.40.

J McMullen sold Fitzpatrick 72 lambs av 78 at \$5.40.

HOGS.

Receipts Thursday, 2,748; from the west direct to packers, 318; on sale, 2,430, as compared with 2,540 one week ago. The quality was not very good. About 25 per cent of the receipts to-day were feeders; there is no demand for them; the packers don't want them, and they are not good enough for yorkers. Market opened slow and weak; later trade was active at prices 2½ to 5c below last Friday's closing. Range of prices: Good mediums, \$4 to \$4.07½; good yorkers, \$3.95 to \$4.05; pigs and light yorkers, \$3.70 to \$3.90; stags, 1-3 off; roughs, \$3 to \$3.40.

Horne & R sold Hammond, S & Co 45 av 196 at \$4.05.

Bergen & T sold same 15 av 255 at \$4.

Jelsch sold same 63 av 242 at \$4.05.

Hansburger sold same 21 av 211 at \$4.07½.

Kelsey sold same 50 av 212 at \$4.05.

Ford sold R S Webb 8 av 137 at \$3.95.

Clark & B sold same 33 av 168 and 60 av 159 at \$4.05.

Peet & Horner sold Parker, Webb & Co 90 av 157 at \$3.95.

G D Spencer sold same 74 av 171 at \$4.

Knapp sold same 66 av 138 at \$4.

Reason sold same 59 av 180 at \$4.

Mayer sold same 57 av 189 at \$4.

Bunnell sold same 78 av 158 at \$4.

Taggart sold same 82 av 173 at \$4.

Haller & Co sold same 74 av 192 at \$4.

Kalahar sold same 28 av 201 at \$4.05.

Nott sold same 44 av 198 at \$4.02½.

Kalahar sold same 28 av 201 at \$4.05.

Rook sold same 23 av 169 at \$3.95.

Watson sold same 33 av 166 at \$3.95.

Beadle sold same 35 av 159 at \$4.02½.

Sprague sold same 35 av 157 at \$4.

Roe & Holmes sold same 42 av 164 and 25 av 190 at \$4.05.

Astley sold Sullivan 64 av 147 at \$3.90.

Stephens sold same 42 av 133 at \$3.87½.

Bunnell sold same 15 pigs av 85 at \$3.70.

OUR BUFFALO LETTER.

East Buffalo, February 24, 1898.

Cattle.—Receipts of cattle on Monday last were 4,774, as compared with 6,842 the same day the previous week, and shipments were 4,180, as compared with 5,192 for the same day the previous week. The market opened with lighter receipts but rather slow. Choice cattle were about steady, while medium to fair lots were a shade lower. Fat cows and smooth heif-

ers unchanged, as were bulls and oxen. The range on steer cattle was from \$3.75 to \$5.25; on heifers, \$3.40 to \$4.50; cows, \$3.20 to \$3.90; stockers and feeders, \$2.50 to \$4.30. At the close the market was steady for good cattle, but slow and dull for others. Since Monday the market has held steady but rather slow, with light receipts. Quotations at the close on Wednesday were as follows: Export and Shipping Steers.—Prime to extra choice finished steers 1400 to 1475 lbs, \$5.00 to \$5.25; prime to choice steers 1300 to 1400 lbs, \$4.70 to \$4.85; good to choice fat steers 1200 to 1400 lbs, \$4.50 to \$4.70; good to choice fat smooth steers 1100 to 1200 lbs, \$4.30 to \$4.40; green coarse and rough fat steers 1050 to 1400 lbs, \$3.75 to \$4.25. Butchers Native Cattle.—Fat smooth dry fed steers 1050 to 1150 lbs, \$4.25 to \$4.40; fat smooth dry fed light steers 900 to 1000 lbs, \$4.00 to \$4.15; green steers thin to half fattened 1000 to 1300 lbs, \$3.50 to \$4.00; fair to good steers 900 to 1000 lbs, \$3.65 to \$4.15; choice smooth fat heifers, \$4.20 to \$4.50; fair to good fat heifers, \$3.75 to \$4.10; light thin half-fat heifers, \$3.40 to \$3.50; good smooth well fattened butcher cows, \$3.50 to \$3.90; fair to good butchers' cows, \$3.00 to \$3.40; common old shelly cows, \$2.75. Native Stockers, Feeders, Bulls and Oxen.—Feeding steers, good style weight and extra quality, \$4.00 to \$4.20; feeding steers common to only fair quality, \$3.75 to \$4.00; good quality yearling stock, \$3.75 to \$4.10; stock heifers common to choice, \$3.15 to \$3.50; export weight bulls, fat and smooth, \$4.00 to \$4.25; good fat smooth butchers' bulls, \$3.65 to \$3.90; fair to good sausage bulls, \$3.35 to \$3.60; thin old and common bulls, \$3.00 to \$3.25; stock bulls, \$3.00 to \$3.50; fat smooth young oxen to good lots fit for export, \$4.35 to \$4.50; fair to fairly good partly fattened young oxen, \$3.50 to \$4.25; old common and poor oxen, \$2.25 to \$3.25; veal calves, fair to extra, \$4.50 to \$7.00. Thursday only a few head received. Market ruled steady and unchanged.

Sheep and Lambs.—Receipts, Monday, were 12,800, as compared with 12,200 the previous Monday; shipments were 9,400 as compared with 9,600 for the same day the previous week. Receipts were lighter, and the market ruled steady to firm for handy lambs, while sheep were stronger than at the close of last week. Yearlings were steady for good, but slow for others. About all offered were taken. Top lambs sold at \$5.70 to \$5.75, with one lot at \$5.80; yearlings, \$4.75 to \$5.25; native sheep, \$3.25 to \$4.30 for culls to best. Since Monday the market has held firm on handy weight lambs, but easy for sheep of all kinds. Exporters are doing little, and heavy sheep and lambs were slow. Quotations at the close on Monday were as follows: Native Lambs.—Choice to fancy native lambs, 75 to 80 lbs average, \$5.70 to \$5.75; fair to good native lambs, \$5.40 to \$5.65; heavy lambs averaging from 110 down to 95 lbs, \$5.40 to \$5.50; good culls and common spring lambs, \$5.00 to \$5.25; common to fair cull lambs, \$4.90 to \$5.10; good to choice feeding lambs, \$5.00 to \$5.75. Yearlings.—Good to choice native handy yearling wethers, \$5.00 to \$5.15; common to fairly good ewe and mixed yearlings, \$4.75 to \$4.90. Native Sheep.—Prime to fancy wethers, \$4.50 to \$4.85; good to fancy handy sheep, \$4.00 to \$4.35; common to fair, \$4.15 to \$4.40; culls and common, \$3.25 to \$4.00; heavy export western fed sheep and wethers, \$4.40 to \$4.50; heavy native wethers, 110 to 150 lbs, \$4.75 to \$4.90.

Thursday the market was easier for sheep but firm for handy weight lambs; heavy export lambs very dull.

Hogs.—Receipts of hogs on Monday last were 27,550, as compared with 24,890 for the same day the previous week; and shipments were 21,470, as compared with 18,240 for the same day the previous week. Monday the market opened active and higher, and most sales were made at the advance. Later the market weakened, and while prices did not decline there was an easier feeling apparent. The range for the best classes of hogs was \$4.30 to \$4.35. The yards were pretty well cleared except some bunches of pigs. Since Monday the market has gradually declined, and on Wednesday the best of the hogs offered sold at \$4.15 to \$4.17½, a loss of 15c from Monday's prices. At the decline the market closed slow and weak. Quotations at the close were as follows: Good to choice light medium grades, 165 to 190 lbs, \$4.15 to \$4.17½; choice and selected yorkers, 140 to 160 lbs, \$4.15; mixed packing grades, 180 to 200 lbs, \$4.15 to \$4.17½; fair to best medium weight, 210 to 260 lbs, \$4.15 to \$4.17½; good to prime heavy hogs of 270 to 300 lbs, \$4.15 to \$4.20; roughs common to goods, \$3.65 to \$3.80; stags common to good, \$2.75 to \$3.15; pigs, 110 to 120 lbs, good to prime corn fed lots, \$3.90 to \$4.10; pigs thin to fair light weights, 75 to 100 lbs, \$3.65 to \$3.90; pigs skips and common light and undesirable, \$3.10 to \$3.60.

Thursday the market was dull and lower. Closing quotations were as follows: Yorkers, \$4.15 to \$4.17½; mediums, \$4.17½; prime heavy, \$4.15 to \$4.20; pigs very dull; good sold at \$3.75 to \$4.10; skips, \$3.10 to \$3.50 per hundred.

CHICAGO.

Union Stock Yards, February 24, 1898.

Cattle.—Receipts for last week were 57,801 head, as compared with 50,798 the previous week and 47,843 for the corresponding week in 1897. The week opened with a lighter supply than expected, which was attributed to the snow storm interfering with the shipment. The lighter supply gave the market more activity than for some days, and sales of desirable cattle were strong to 10c higher. Prime steers were scarce, and sold at \$5.30 to \$5.60; the range on other classes of steer cattle was from \$4 to \$5.15 for common to choice. Feeders and stockers sold up to \$4.40; heifers, \$3.85 to \$4.30 for thin to good fair ones in fair condition; cows, \$2.75 to \$4.00. The supply of butchers' cattle was light, and it ruled active and generally at some advance. Up to and including Wednesday of this week receipts have been 34,540, as compared with 32,606 for the same days last week. On Wednesday the shipping and export trade took the cream or offerings in the steer line at practically steady prices, ranging from \$4.60 to \$5.25 mostly, but the whole dressed beef element was bearish from the start, and the bulk of steers on offer met a dull, sluggish market, with prices weak generally. The stocker and feeder trade is feeling the depressing influence of the beef cattle market, and business is of small volume, with prices some lower to-day than on Monday. All classes of butchers' stock were slow sale to-day, and prices were unevenly lower.

The range on steer cattle was \$4.50 to \$5.30, but the latter were not extras; common to good cows, \$2.50 to \$3.50; stockers, \$3.45 to \$4.50. Calves in light supply, and selling at \$6.00 for good to best.

Thursday estimated receipts were 10,000; market steady for good cattle, weak for others; steers sold at a range of \$3.80 to \$5.35; cows and heifers, \$2.10 to \$4.35; Texas steers, \$3.50 to \$4.30; stockers and feeders, \$3.40 to \$4.40.

Sheep and Lambs.—Receipts last week were 73,388, as compared with 67,992 for the previous week, and 62,566 for the corresponding week in 1897. The market opened with a good supply, and trade was slow on sheep, but prices did not change, the range being \$4.40 to \$6.00 for good to choice light weights, heavy exports selling at \$4.35 if good; common to fair sheep, ewes and wethers, \$3.80 to \$4.25; yearlings, \$4.65 to \$5.00. Lambs were largely in evidence, and from steady to weak; fancy Mexicans made \$5.60; choice, \$5.50; good fed westerns made \$5.25; top native lambs around \$5.60; medium to good lambs, \$5.25 to \$5.40; common lambs, \$4.75 to \$5.00. Up to and including Wednesday of this week receipts have been 52,369, as compared with 37,880 for the same days last year, which shows strongly how the sheep feeding business is enlarging. Wednesday the market was fairly active for sheep, with choice heavy weights selling around \$4.35, and good to choice light weights, \$4.40 to \$4.60; exports on the yearling order quotable at \$4.75 to \$4.80; shorn sheep sold at \$3.50 to \$3.90. Lambs were weak, but fairly active, considering the liberal proportion of them on offer; good to choice, \$5.30 to \$5.55; some inquiry for feeding lambs at \$5.00 to \$5.25; shorn lambs, \$4.50 to \$4.75. Among the sales was one bunch of sheep, 172 lbs average, at \$4.35, for export.

Thursday's receipts estimated at 15,000; market was steady and unchanged.

Hogs.—Receipts last week were 178,527, as compared with 186,054 the previous week, and 187,427 for the corresponding date in 1897. The supply on Monday was less than expected, and the market opened active and 5 to 10c higher. Some early sales were made at \$4.20 to \$4.27½, but later the market weakened, and the closing range was \$4.15 to \$4.20 for prime medium and heavy butcher and shipper shapes, \$4.00 to \$4.12½ for ordinary to choice packers, \$4.05 to \$4.15 for mixed, according to weight and quality; \$4.00 to \$4.10 for light and light mixed; pigs around \$3.40 to \$3.75. Up to and including Wednesday of this week receipts have been 87,866, as compared with 93,739 for the same days last week. On Wednesday there was a further decline. Shippers and butchers bought most of their prime medium and heavy at \$4.05, but with quite a number at \$4.07½, and a shipper paid \$4.10 for a load of fancy 330-lb average. The lightweight buyers were bidding even \$4 generally. Bulk of hogs weighed up at \$3.95 to \$4.50, but with nothing of weight and quality below \$4 during the early market. Coarse heavy packers and trashy light lots, \$3.75 to \$3.90.

Receipts Thursday estimated at 24,000; market fairly active, steady to strong; light, \$3.85 to \$4.05; mixed, \$3.90 to \$4.07½; heavy, \$3.85 to \$4.10; rough, \$3.85 to \$3.95.

CALAMITY'S SHADOW HOVERS OVER THE SOUTH.

There were five or six of us on the hotel veranda, and when Major Hillson was seen coming up the street a boy was ordered to bring out a glass of water for every sifter. We were sipping the beverage when the major halted at the steps and looked up, and Capt. Chisholm, who was the only one who knew him, called out:

"Mawnin' to yo', majah—I hope I see yo' well?"

"Mawnin', captain," was the reply; "mawnin' to all."

"Won't yo' come up and join us?" "I was going over to the compress, but I am in no powerful hurry."

The major came up the steps, was introduced to each of us in turn, and as he sat down the captain said to the young negro:

"Heah, boy, bring Majah Hillson a glass."

A glass of water was brought out and placed on a table at the major's elbow. He carefully inspected it for a long, long minute and then looked around at the other glasses. Then he lifted his glass and said:

"Capt. Chisholm, the contents of this glass seem to me to be water—nothing but water."

"Jest plain water," replied the captain.

"And yo' ar' drinking plain water yo' self?"

"I am, sah."

"And these other gentlemen—they are drinking plain water?"

"Jest plain water, majah."

"Capt. Chisholm," said the major, as he put down his glass and rose to his feet. "Is there a report to the effect that the cotton crop has failed?"

"Not that I have heard of, sah. Cotton crop seems to be all right, majah."

"Has the state of Alabama repudiated her obligations?"

"Not that I know of."

"Anything wrong with corn, oats, peanuts and tobacco?" continued the major.

"Nothing wrong, suh—not that I've heard of," answered the captain. "Do yo' suspect anything wrong, majah?"

"Yes, sah; I do."

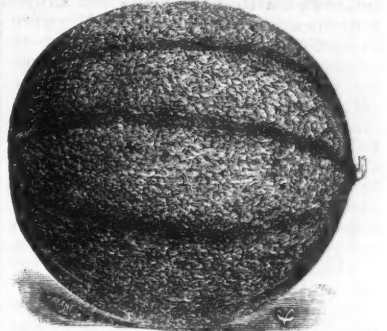
"And will yo' kindly explain?"

"I will, sah. When I find Capt. Chisholm, a true son of the south, drinking plain water, out of a plain glass, surrounded by a mob who are

also drinking plain water out of plain glasses, it strikes me that the glorious south is on the eve of a great calamity, so I had better get along to the compress and do my business with Kernel Skellings! Gentlemen, excuse my abrupt departure, and yo' can divide the contents of this glass between yo'!"—Atlanta Constitution.

A New Musk Melon.

We present herewith a cut which gives a very good idea of the general form and appearance of the melon. The "Paul Rose" Musk Melon, named for its originator, an experienced grower and shipper of commercial melons. This new melon is salmon fleshed and is the successful cross of the Osage with



the Netted Gem, combining the good qualities of both. It is very thick fleshed and has a remarkable small seed cavity. The melons are very uniform in shape and will average about five inches in diameter, is a strong, vigorous grower, and a heavy yielder and is said by experienced dealers to be the best shipper they received during the last season. In the Chicago markets last season, at a time when the market was glutted with melons of this class, and when other sorts were selling as low as 10c per half bushel basket, the "Paul Rose" or Potosky as it was branded, was quoted active at \$1.35 and \$1.50 for baskets of the same size. A more complete and full description will be found in the handsome illustrated catalogue of Vaughn's Seed Store, Chicago. Send 10 cents for a packet of this new melon and they will mail you the catalogue free. Mention this paper.

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Horticultural.

For the Michigan Farmer.
ROOT PRUNING.

For a number of years I have followed Mr. Crawford very closely and have received much instruction from his articles, but must disagree with his article on root pruning in a late issue of The Farmer. Perhaps it is a case of where "St. Paul and I differ," as the old lady said, but it must be remembered that the years Mr. Crawford mentions—1896 and 1897—were exceptionally good years in which to transplant trees of any kind; 1897 was the best year I ever knew for transplanting. It did not seem to make much difference whether a tree had roots, or how it was planted; it grew right along. But such years come only once in a long time. Every year I transplant thousands of trees, both deciduous and evergreen, and while it does not pay to dig holes for too long roots, it also does not do to cut the roots too short. In digging trees, every nurseryman has more or less stock to transplant, and if we could cut the roots very short and still have the stock grow another year and make good trees, it would be a great saving to us in both time and money. I have given this theory quite an extensive trial at different times, and cannot indorse it, for, except in very few instances, it has not given good results.

Three years ago we had very many apple and pear trees "under grade." Still they were nice, straight, healthy trees, and we transplanted them. A part of them had their roots badly mangled in digging and were cut very close. The tops were also cut back as much as we dared, most of them being trimmed to a whip. These were set on as good soil as the balance, and much more pains were taken in transplanting, but at the end of the season no one would have bought the root-pruned trees and quite a percentage of them died. The ones not root-pruned were trimmed in same way the others were, all were given the same care and cultivation, and fully one-half were large enough for sale.

Last spring we purchased 6,000 trees at Rochester, N. Y. When we received them we found that part of them had badly damaged roots. The party we expected to buy them failed to materialize and they were left on our hands. These were transplanted into nursery rows, those with bad roots being set out by themselves. They stand there to-day and anyone can come and look them over and see the difference. All seemed to grow alike until the extreme hot weather in July, when the root-pruned ones stopped growing and many died. "Having no root, they withered away."

One reason why strawberry and grape plants do better when root-pruned somewhat is, almost always the ends of the roots are dead. This is true when shipped far, and these should be cut back to healthy matter. Another is, there is usually such a mass of roots that, instead of being carefully straightened out when planted, they are curled or wadded up and stuck into a hole too small, the soil drawn over them and not tightly packed, allowing the air to get in and dry out the roots so much that there is no life in them. All roots, whether of trees or plants, should be judiciously pruned, cutting out all dry or broken or diseased ones and cutting the ends of mangled ones off smoothly. Prune the top into as good shape as possible, plant in the very best manner, in good soil, and if weather is not unfavorable, whatever you plant will not disappoint you by refusing to grow.

Livingston County, Mich. F. L. WRIGHT.

For the Michigan Farmer.
FRUIT NOTES.

The peach, we have frequently seen it stated, requires a thin soil. One of the best orchards we have seen was on heavy clay land, and some growers who have made a success with the peach say they prefer such a soil. We believe that the location is of more importance. If the ground is low and flat it is not fitted for peaches, no matter what the texture may be. Clay is not so easily cultivated as a soil containing sand, and this is one reason why it is productive, though the fruit is hardly of as good quality or as highly colored, though it is larger than that from lighter soil. It may be that a tree will endure more neglect on a thin than on a firm soil, but as to that

we are not prepared to say. At least we have seen very old trees on sandy ground, but do not remember of any on clay to compare with them, and perhaps it should not be expected. The peach needs an abundance of loose earth. If clay is left to itself it soon becomes compact and unfavorable for such a tree as the peach, but if properly cultivated we have noticed that the trees thrive.

The quince has not received the attention which it merits or which might have been expected from a fruit so easily grown. The best soil for it is a deep loam, well drained, but any soil that will produce potatoes is good for the quince, as it is quite easily satisfied. We do not recommend it as a market fruit for the farmer because the demand is too uncertain. Its uses are limited and the market is easily glutted. But two or three bushes might well have a place in every garden and would supply all of the fruit needed for a large family.

Little in the way of cultivation is required, further than keeping the ground free from weeds and grass. The suckers should be kept cut off from branches and roots, and if the tops get too luxuriant they should be headed in. They will frequently begin to bear in three or four years after being set out, and have been known to last forty years, providing fruit with regularity. We believe that insects trouble it the least of any fruit. A handful of salt thrown about the bush in the summer is good for it. We have put on as much as half a pint to the bush, but presume half that amount would be enough.

The uses for the fruit are not many, being confined principally to preserves and jellies. In some of the warmer localities quince cider is made, but the fruit is too dry and hard to be of much value for this purpose. The yield is too small, even if there were anything about the liquor to recommend it.


Twenty years ago considerable was said in the horticultural publications about fig growing in the North. The tree was found to be half-hardy. The roots would send up sprouts in the spring, only to be killed down in the fall, and would do this year after year unless the new growth were protected in some way, the roots retaining sufficient vitality to make an effort at growing. By protecting the trees where they stood, or by bending them down and covering with earth they would pass the winter in safety. They would bear fruit but not of a high quality. Altogether, the results were a poor return for the trouble. We have not heard much about the fig in the North for several years. It was too far out of its sphere. It could not have the long period of high temperature which is necessary for giving the fruit its delicate flavor. But the interest in it served to assist nurserymen to get rid of their stock and resulted for some people in the knowledge which comes from experience.

A writer in one of the horticultural journals gives a method for utilizing the strawberry bed the first year which may recommend itself to many who have only a few rods of ground to spare for gardening. The ground was heavily manured and then thoroughly worked so as to make it deep and mellow. The berry plants were set in rows four feet apart and two feet apart in the row. This was done about May 10, and four weeks later tomato plants were set between the rows, the hills coming in line with every alternate cross-row of strawberries, thus making them four feet apart each way. A cultivator was run through to loosen the soil packed by setting the plants. Both plants had all the room needed. A good crop of tomatoes was raised without injury to the strawberry plants. In the fall the tomato vines were left for a mulch. Where land is limited the plan is a good one, but on a farm where there is room enough and to spare this method of double cropping does not meet with favor. The extra trouble of cultivation does not pay for the saving of a few rods of land, unless both tomatoes and strawberries are raised on a larger scale than the family garden requires.

In answer to a query regarding black walnut trees planted in an orchard where apple trees are missing, the Farm Journal has this to say:

"Whether the black walnut exhausts the plant food in the soil, or the moisture, or has some poisonous effect upon the apple, we are not prepared to say,

(Continued on page 177)



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but we have frequently observed that apple trees will do no good anywhere near black walnut trees. You had better root out one or the other."

We have a high opinion of the Farm Journal, but can not at present agree with this statement. On this place are two thrifty walnut trees which stand at the east of an orchard and within two rods of the nearest trees. That row of apples, consisting of Russets with grafts of Baldwins, can beat any others in the orchard for fruit, even though for nearly twenty years it has had such pernicious neighbors. Close to the trees on the east side are peaches which came into bearing in '94. Two years after they had as heavy a crop as any trees of the variety in the orchard. Within forty feet of the walnuts are two Crawfords that have been set at least fourteen years. They have given us several good crops of excellent fruit, and look as though they were good for many years more. The walnuts have also been productive, so we cannot see where any harm has been done. This is only one instance. We have had no opportunity to compare it with other cases, but evidently an invariable rule cannot be laid down in respect to this. Undoubtedly there are many readers of The Farmer who have walnut trees close to an apple orchard. What has been the result? It is something in which many of us are interested. The walnut is innocent-looking enough. We would not think of accusing it of mischief, except upon the best of authority.

F. D. W.

PRUNING GRAPE VINES.

The trouble with an unpruned vine is that it bears too much fruit, and this means poor quality. Let us take a thrifty Concord vine to illustrate this matter. At the end of the season such a vine, in good soil, kept well tilled, should have somewhere near to 300 fruit buds on the new growth of the past season. Now, a good Concord vine should bear about twenty pounds of first-class fruit each season; if it does this steadily year after year no more should be expected. To bear that amount of fruit, not more than fifty buds are required. But as we have seen, our vine has about six times that number, hence many in excess of the need. Leave the vine untrimmed and the 300 buds will overbear and the yield will be very inferior. Prune to reduce the number of buds to fifty and a good crop of fruit may be expected. That is the simple proposition needed for guiding your pruning knife. Cut away, therefore, enough of the young canes to bring the buds down to the right number. A good rule with Concord is to remove all the canes but five, and cut these back to nine or ten buds each. The Delaware class should have even less. Prune and tie up so as to have a good distribution over the trellis. The pruning should not be deferred beyond this month if it can be helped. All things considered, fall is perhaps even a better time for grape pruning.—Vick's Magazine for February.

MARYLAND FRUIT-GROWERS AROUSED.

A convention of Maryland fruit-growers was held at Baltimore the last week in January at which a state horticultural society was organized and officers elected. Fruit men were forced to form some kind of an organization to make common cause in the work of stamping out disease and fruit parasites. A committee on legislation was appointed, and it has prepared a bill providing for an appropriation of \$20,000 for the extermination of the two pests that threaten the fruit crop—the San Jose scale and peach yellows.

It is estimated by the fruit men that \$20,000 will be needed for this work the first year, and a smaller amount each year afterward. If this is not granted there is little hope of preventing the spread of the pests over the State.

Prof. Johnson, State Entomologist, reported that, while no complete statistics of Maryland orchards were available, it was known that on many farms from 10,000 to 28,000 peach trees had been killed on account of the San Jose scale. He located the pest in 16 counties of the 23. These represent 43 localities, 74 orchards, in which are growing 1,672,440 trees. In these orchards 58,000 trees are infected, and 45,000 of them have been killed within the past two or three years, leaving in the heart of these orchards over 10,000 infected trees to spread the conta-

gion. One orchard of 28,000 trees, planted six years ago, has been raided by the pests. In the vicinity of Sharpsburg an entire orchard of 10,000 trees had been killed.

WHAT VARIETIES SHOULD HE PLANT?

A correspondent at New Haven Center, Gratiot County, sends the following query: "As I am going to set out a peach orchard next spring, I would like to have some one inform me what variety would be best adapted to this climate." To answer that question understandingly there are some other points which should have been mentioned—soil, moisture, etc. If this is a new venture in that neighborhood, of course there will be some risk with any variety. If, however, there are any peach orchards in the vicinity, it would be good policy to visit them and see what varieties have succeeded. Another point is that in such an orchard, to be set out for commercial purposes, more than one variety should be grown. Some of the early varieties, or of any one of them, should be planted, then the main crop of some standard variety which is of handsome appearance, with yellow flesh, high color, and of course a free-stone. Then there should be some trees of a late variety, to extend the season as much as possible. Who among our readers in Gratiot County can answer our correspondent's query from practical experience? We do not know of any peach orchards in that vicinity, but there may be, and if so we would like to hear from the owners on this subject.

At the recent convention of the California State Fruit Growers' Association some interesting statistics were given regarding the native production of olive oil. This comparatively new industry has now attained quite an important development. It was stated that "there are 2,500,000 California olive trees now bearing." It was said that great injury had been done to the olive oil business by the general practice of adulterating with cottonseed oil, which is, of course, very much cheaper than olive oil. Another speaker, who had visited Italy and Southern France, where the great olive tree vineyards are located, said that he doubted whether pure olive oil could be obtained even there in any quantity on account of the adulteration with cottonseed oil, which these regions import for that purpose. Some of the speakers asserted that cottonseed oil is not only indigestible, but highly injurious to those using it, while pure olive oil has been known and esteemed for thousands of years.

The Poultry Yard.

SUMMER OR WINTER EGGS.

Samuel Cushman, the Rhode Island poultry expert, thinks there is more money in summer than winter eggs, and gives his reasons for the opinion. Of course the arguments are not all on one side, but we doubt if his ideas will be generally accepted. He says: "Eggs partly produced from grass and green crops in June, July, August, September, and October, cost less and bring a high price during these months. March, April and May are the months when eggs are cheapest and hens should then be encouraged to rest from laying. It should be borne in mind that the cost of producing eggs in winter is greater than in summer. Forcing hens during cold weather will make them lay more, but they will not lay so well the remainder of the year, and there is greater risk of disease. Eggs average higher in June, July and August than in February and March. The winter layers are on a vacation.

"On farms where hens are at liberty and feed all the green crops they want the cost of the egg product in summer will be very much lower than in winter. The town or village specialist who buys all he feeds and whose yards in summer are a hot, sandy, barren waste may do much the best to produce winter eggs, but the farmer is not advised to work for them principally. On a farm in the vicinity of the summer resorts it would be wise to run two-thirds of the stock for eggs that sell in the summer months when the price is high. Considering the housing capacity and the food, cost and labor, it ought to pay the best.

"These views in regard to the production of eggs in the summer months

may seem rank heresy to many. Follow them up and study it out for yourselves. We should give them serious consideration if we were running an egg farm."

POULTRY NOTES.

An eastern farm paper thus answers a correspondent who wanted to know how to keep his neighbor's hens out of his garden: "Dear correspondent: Take a lot of small, stiff cards, about 1x2 inches; write on them, 'Please keep your darned hens at home.' Tie a short string to each card, with a grain of corn at the other end of the string, and scatter them where the hens congregate. When the hungry biddy gobbles up the grain that draws the prize, she follows up the string, stowing it away until she comes to the card. Then you will see her pull out for home, carrying in her mouth your polite request."

A Canadian writer, who is also an experienced poultry breeder, speaks of "utility breeds," and says:

"Along this line the writer would offer the suggestion that Plymouth Rocks and Wyandottes are the ideal utility breeds, being prolific layers, good mothers, and for market purposes the white varieties are the most inviting, having the yellow flesh and clean yellow legs which are always sought after and fewer noticeable pin feathers than any of the colored varieties." His views will meet the approval of the majority of poultry raisers, although other breeds may have plenty of admirers who would place them first.

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All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elva, Mich.

Association question for March: Farmers' Mutual Fire Insurance Companies. How Can They Be Improved?
Association question for April: The Present Rural School System. How Can It Be Improved?

A FEW FACTS ON INSURANCE.

In order that we might present to our readers the necessary data for an intelligent discussion of the March Association question, we have made a careful and painstaking examination in the office of the Commissioner of Insurance at Lansing of the reports for the last twenty-five years of all the Farmers' Mutual Insurance Companies in Michigan. In the following table we have arranged, for periods of five years each, the average assessment rates of all of these companies doing business in Michigan:

1872 to 1876 inclusive,	\$1.52	per thousand dollars.
1877 to 1881	1.53	" "
1882 to 1886	1.73	" "
1887 to 1891	1.98	" "
1892 to 1896	2.47	" "

The facts shown in this table alone ought to insure a thorough and systematic discussion of the question by every farmers' club in Michigan. That there is over \$200,000,000 insurance on farm property carried in these companies will be a surprise to many people. On this insurance was paid by the farmers of this State in assessments during the last five-year period, from 1892 to 1896, the immense sum of \$2,470,000, or an average of \$494,000 per year. Had the management of these companies been such that the assessment rate of 1872 to 1876 had still prevailed, the farmers of this State would have saved \$190,000 in insurance tax alone each year of the period, or \$950,000 for the entire five years. Had the rate of 1882 to 1886 continued, there would have been a saving annually of \$148,000, or \$740,000 for the five-year period. Had there even been no increase over the high rate of 1887 to 1891 the amount paid out would have been decreased \$98,000 each year, or \$490,000 in the period.

These facts suggested to us the March Association question, and we think they are of sufficient importance to interest every farmer in this great State in the discussion.

Our study of the question leads us to believe that the mismanagement of these companies may be attributed chiefly to the following causes:

First, The fee system of paying the secretary and the agents.

Second, Too large territory covered by the company.

Third, Failure to re-insure within a reasonable period.

Fourth, The lack of a proper mortgage clause in the charter.

It fell to the editor of this department two years ago to take an active part in the formation of a new Farmers' Mutual Fire Insurance Company, and in the drafting of a charter and by-laws for the same. In this company has been put into practical operation the suggestions we have made in this department during the past few weeks; and the fact that nearly two years have elapsed with as yet no necessity for making an assessment bears evidence that at least a portion of the difficulties surrounding other companies have been removed.

THE VERDICT ON THE INSTITUTE QUESTION.

We present in this issue the verdict of the first twenty-five clubs to discuss the February Association question. In the immediately succeeding issues will appear the verdict of those which report at a later date. It will be noticed that thus far about two-thirds of the clubs oppose further State appropriations, and that of those which refer to the management, practically the same proportion desire a change in the same.

Those opposed to the appropriation raise the following objection: First, It is class legislation of a most objectionable kind. 2d, It establishes a

dangerous precedent which other classes will surely take advantage of. 3d, It is unconstitutional and hence unwarranted even on educational grounds. 4th, It is inconsistent with the just demands of farmers and other business men that unwarranted and unnecessary appropriations of public funds shall cease. 5th, That as good, and oftentimes better, institutes have been, are being and can be in the future held without as with State aid, and that what farmers or any other class do for themselves has a greater value to them than any benefaction can possibly have. 6th, That to secure the appropriation from the legislature the farmer members are compelled to support many other measures of a questionable character which they would otherwise oppose.

Those favoring the appropriation urge; 1st, It is not class legislation. 2d, If class legislation it is justifiable on educational grounds. 3d, That other classes receive similar and even greater favors. 4th, That in no other way could experienced speakers from other states be secured. 5th, That though the appropriation is somewhat large in the aggregate, yet that it does not add greatly to anyone's individual tax. 6th, That this is the only chance the farmers have of getting at the public funds, and that it would be foolish not to accept the opportunity.

The encouraging feature, never to be lost sight of, is the fact that every participant in this discussion has placed himself on record as emphatically in favor of farmers' institutes. There is an honest difference of opinion regarding State aid and State management, but on the broader, general question as to the value of these gatherings, all are agreed. With the numerous great organizations of farmers in this State, the Farmers' Clubs, the Grange, the Dairymen's Association and the several Live Stock Breeders' Associations, each with a splendid State organization, no true friend of institutes need be afraid that the necessary machinery for systematically carrying on the work will ever be wanting, though the State should withhold its aid in the future.

REPORTS FROM LOCAL CLUBS, FEBRUARY.

THREE NEW CLUBS.

At the One Day Institute held in Washington township a new club was organized with the following officers: President, O. J. Campbell; secretary, W. H. Foster; treasurer, Mary Duncan; corresponding secretary, G. M. Long. The first meeting was held with S. N. French, with thirty-five members. A paper on the "Object of Farmers' Clubs," by Mrs. French, brought out a lively discussion, and caused all to see the need of club work. The next meeting will be held with David Duncan, the second Thursday in March.

Gratiot Co. REPORTER.
FARMERS' CLUB OF COLUMBUS.

At a meeting of farmers held with Mr. and Mrs. Clayton Fuller, Feb. 10th, this club was organized. John Schoof, was elected president; Wellington Congdon, vice-president; Mrs. Wm. Quick, secretary; Mrs. Ralph Graham, corresponding secretary. The first regular meeting will be held Feb. 23, with Mr. and Mrs. Hosea Mabon, with meetings hereafter the fourth Wednesday in each month. The question for discussion at the February meeting will be "Which is more profitable, special or general farming?"

MRS. RALPH GRAHAM, Cor. Sec.
St. Clair Co. HAMPTON FARMERS' CLUB.

This club was organized in Hampton, Bay Co., in April, 1897, and has since held semi-monthly meetings. President, A. H. Eddy; vice-president, Mrs. J. B. Stevens; recording secretary, Miss Kitty Eberhurst; treasurer, John Van Popplen; corresponding secretary, John Egan.

Bay Co. JOHN EGAN, Cor. Sec.

THE VERDICT ON THE INSTITUTE QUESTION.

ARGONAUT FARMERS' CLUB.

After a very thorough discussion the following resolutions were adopted unanimously:

Resolved, That a State appropriation in aid of Farmers' Institutes is without constitutional warrant; is class legislation, and is a positive injury to farmers themselves.

Resolved, That the utmost power of the State Association of Farmers' Clubs should be exerted against such appropriations in the future.

Oakland Co. SECRETARY.

BERLIN FARMERS' CLUB.

An animated discussion took place after which a vote was taken which

was almost unanimous in favor of State appropriations for Farmers' Institutes.

The proposed "Good Roads Movement" was also thoroughly discussed, the decision being emphatically against it. Sixteen new members were added.

MRS. H. L. IVES, Cor. Sec.
St. Clair Co.

CENTRAL FARMERS' CLUB.

With regard to State appropriations for Farmers' Institutes the sentiment of the club was in favor of the same. No criticisms were offered on the present management.

A paper on "Taxation," by Alba Harris, contained the following valuable thoughts: A man whose word is as good as his bond in other matters will prevaricate when giving in his assessment. The more property he has the worse he generally is in this respect. Railroads do not pay their share. The average eighty-acre farm is taxed twenty-five dollars. The same amount of real estate in value owned by a railroad is taxed only four dollars. The difference is too wide.

Ionia Co. D. G. LOCKE, Cor. Sec.

EXETER FARMERS' CLUB.

The vote upon the Farmers' Institute question resulted in an unanimous verdict in favor of the present management.

MRS. R. F. KNAGGS, Cor. Sec.
Monroe Co.

ESSEX FARMERS' CLUB.

The sentiments of this club were expressed in the adoption of the following resolutions without a dissenting vote, after an animated discussion:

Resolved, That the present arrangements under which the State Farmers' Institutes are conducted are susceptible of certain changes which we believe would inure to the benefit of the institutes. 1st, The institutes being for the especial benefit of the farmers, their immediate care should be in the hands of some one of the practical farmers of the State; such a one as by practice and experience is fully acquainted with the farmer, his condition and his needs. 2d, That the necessity does not exist for going outside the State for institute workers. 3d, That a more full recognition should be paid to the local portions of the programs, and that some part of the cost of providing halls, publishing programs, etc., should be borne by the institute fund.

Interesting exercises commemorative of the birth anniversary of Washington were thoroughly enjoyed.

J. T. DANIELLS, Cor. Sec.
Clinton Co.

FULTON CENTER FARMERS' CLUB.

Resolutions were adopted as follows: Resolved, That the present management of the State Farmers' Institutes is not giving the most good for the money expended; that some one of our brother farmers can do us more good by giving us their practical experience than an outsider who knows less of our needs; that if we accept any help from the State appropriations it shall be used for incidental expenses.

In considering the question of "Taxation" the unanimous verdict was in favor of greater equality in taxation and a more conscientious performance of their duty by public officials.

It was decided to publish the reports of our meetings in the county paper.

Clinton Co. REPORTER.

GENOA FARMERS' CLUB.

In the discussion of the Institute question it was thought that the One Day Institutes were a benefit, but that we are decidedly opposed to any more State appropriations being made for institute work as now conducted.

Eugene Dunning, in a talk on "Doing work better," advocated preparing the seed bed better, even though one day later in sowing the seed, also keeping a strict account of receipts and expenditures.

Messrs. A. Tooley, J. Haller and Eugene Dunning agreed to enter into a contest to see which could produce the best field of corn to be reported when the corn is harvested. Also another contest was entered into by Messrs. F. Metz, E. Latson and A. J. Dunn, to determine which could produce 3,000 pounds of milk the cheapest.

MRS. T. J. CONELY, Cor. Sec.
Livingston Co.

HOWELL FARMERS' CLUB.

The two following resolutions were offered on the institute question:

Resolved, That we request the State Board of Agriculture to furnish an itemized account of the disbursements of the Institute appropriation, and that the same be published in the Institute Bulletin.

Resolved, That we are opposed to the present management, and also to any further State appropriations for an institute fund.

The first resolution was carried unanimously. On the second many wished to give the matter more study before putting themselves on record, since the institute for this county had not yet been held. Of those ready to express an opinion a majority voted against the resolution as submitted. The question will be brought up again at the next meeting, and the result will be awaited with much interest.

In the discussion of the question, "Should husband and wife share and share alike in the distribution of property?" the following thoughts were suggested: The Bible considers them as one, the wife does her share of the work, then why not stand on an equal footing with her husband? If there is any difference it should be in favor of the wife. The present law is not just in some instances. It deprives children of their rights in many cases.

MRS. R. R. SMITH, Cor. Sec.
Livingston Co.

LEBANON FARMERS' CLUB.

No resolutions were adopted. The following opinions were expressed: Pres. Abbott: The good we get from them depends on the use we make of what we are taught there. He was afraid, for instance, that few women yet test their cream with a thermometer, instead of the time-honored finger. E. Piggett compared Farmers' Institutes with Teachers' Institutes. We get what good we can from them. Men are sent out by the State at great expense, who, in many cases, are ignorant of special local conditions. If we are to have instructors to teach us agriculture, let us have a voice in selecting them. J. Sessions: Farmers are receiving the benefits of class legislation when they accept State aid. It is given as a sop to prevent their opposition to other class legislation. Milo Grove heartily agreed with the latter view.

Jay Sessions gave his report as delegate to the State Association. He reviewed the work accomplished there and dwelt upon the inspiration afforded, particularly at the joint evening session. He said the address of Gov. Pingree was a splendid presentation of the views of an honest executive.

A paper by Mrs. Miles Loomis on "Boys and Tobacco," brought out the following: The health, moral and physical, of our boys is at stake. We women must begin the crusade against it.

MRS. MAY WARNE, Sec.
Clinton Co.

MILFORD FARMERS' CLUB.

John Gamble thought for work of this kind the institutes are all right. S. Vincent and R. J. Marsh believed that better results could be obtained with less expense to the taxpayers by organizing into county societies and using more local talent. At present the State speakers tell the same story in all parts of the State, and unfortunately for them, the same things are not wanted everywhere.

The following resolution was adopted:

Resolved, That it is the sense of this club that the State Board of Agriculture should give an itemized account of the days worked and the expenses of each speaker in the institutes for the coming year, the same to be published in the annual Institute Bulletin.

Oakland Co. W. D. ALLEN, Cor. Sec.

MAPLE RIVER FARMERS' CLUB.

"Should the superintendent of State institutes be a practical farmer?" was treated by William Gladden. His treatment of the question was in an emphatic affirmative. He commented very favorably on the growth of the work in this State. Favored outside help to aid in carrying on the work.

"Why should railroads be taxed as other property?" was presented by E. J. Cook. He said in part: "Our State government meets its expenses by a tax on the people, and according to Art. 14, Sec. II, of the State Constitution, this tax, to be lawful, must be equally proportioned. One-third of the valuation in Michigan of railroad stock is \$140,333,333. This property should pay an annual tax of \$3,508,333, whereas it pays only \$741,408.77. As a rule railroad corporations pay about one-fifteenth as much tax as the individual taxpayer. It is no argument to say that railroads are oppressed by hard times. Does this excuse the farmer from taxation? All property, both corporate and individual, should pay its just portion of taxation."

Rep. F. M. Shepard said he differed from Mr. Cook as to the proper mode of taxing railroad property. It should, and does pay a specific tax, but he thought the present specific tax is not

high enough. If taxed otherwise, the large cities where the rolling stock is kept, will get all the benefit.

A. B. Cook thinks a specific tax impractical. Instead of paying \$250,000 increase in taxes, they should pay \$2,000,000.

State Senator Hadsall believes that one of the most serious difficulties in securing just taxation lies with the neglect of the assessing officer to do his full duty. He believes in fixing railroad valuation by a State board of assessors, by whom the supervisors of each township and city are advised of the rate per mile of the road, and of the assessable value of the personal property, and in having the road assessed on that basis. He does not favor local taxation.

C. P. REYNOLDS, Cor. Sec.

NORTH PLAINS FARMERS' CLUB.

The subject of an appropriation for Farmers' Institutes was taken up and discussed, the prevailing opinion being in the affirmative.

The meeting was well attended, notwithstanding the inclement weather and bad roads, which goes to show that the people are waking up to the fact that farmers' clubs are a good thing, mentally, morally and socially.

MRS. D. S. WALDRON, Cor. Sec.

OXFORD FARMERS' CLUB.

The discussion of the manner of conducting institutes was animated and logical. The following resolutions were adopted unanimously with the exception of one dissenting vote on the second:

Resolved, That we believe that appropriations for Farmers' Institutes in Michigan is not class legislation, but justified on educational grounds. Second, That we believe that institute bulletins should go more into detail as to the prices paid to speakers, the number of days employed, etc. Third, That we believe in local management of institutes.

The following officers were elected for the ensuing year: Pres. John W. Van Wagoner; vice-president, Mrs. Edson Taylor; secretary, J. G. Noble; treasurer, Payne Chappel.

Oakland Co. REPORTER.

PROGRESS FARMERS' CLUB.

Some were in favor of State Institutes, while others favored the County institute idea. Nearly all seemed to be against State appropriations. The officers were re-elected. It was voted to have the proceedings of the club published in the Vassar papers. A paper, "Is any good to be derived from criticism?" was read by Carrie Proctor. She said: "In no other way can we know ourselves." In the discussion the idea was brought out that we criticize our government officials too much, but the prevailing opinion was that it was a poor official who will not stand criticism.

MRS. F. A. BRADLEY, Cor. Sec.

PARMA FARMERS' CLUB.

State institutes were quite thoroughly discussed and favored unanimously. Ex-President Peckham, although in full sympathy with institute work, thought we are paying quite too dear for our State speaking, it costing Jackson county about \$100 for three hours' work. That we have local talent sufficient for our institute work. That the lawyers, doctors, blacksmiths, etc., have as much right to such appropriations as farmers. Rev. W. M. Colby and others thought the State appropriations enabled sparsely settled localities to hold institutes. That the social benefit would more than compensate for the cost.

The annual election resulted as follows: President, E. W. Campbell; vice-presidents, F. Hutchinson and Miss Minnie Horton; secretary, Carl Horton, Albion, Mich.; corresponding secretary, Brad L. Hubert, Parma; treasurer, E. L. Hubert.

BRAD L. HUBERT, Cor. Sec.

JACKSON CO. SPRINGPORT FARMERS' CLUB.

It was thought by some that local talent was not sufficiently used. This was rather overbalanced by others who thought that the experienced speakers from abroad were men who had given their subjects a great deal of study.

Officers for the ensuing year: President, B. A. Joy; vice-president, Mrs. Allen Crawford; secretary, Edith Burgess; treasurer, Mrs. Nellie Whitman; reporter, Ada Wellington.

ADA WELLINGTON, Reporter.

JACKSON CO. SPRING ARBOR FARMERS' CLUB.

The discussion opened with a paper by Hon. H. N. Tefft, representative in the State legislature. He thought the appropriation a poor investment. Geo.

Douglass: We do not receive the benefit we should from this appropriation. Our union club meetings have been a grand success, and one great reason is that speakers are local and speak from a practical standpoint.

After thorough discussion the following was adopted:

Resolved, That the Spring Arbor Farmers' club is in favor of County Farmers' Institutes; that it is opposed to the State appropriations and to State management.

There was the usual good attendance and great interest was manifested.

Jackson Co. C. J. REED, Cor. Sec.

SOUTHWEST VERNON FARMERS' CLUB.

The sentiments of almost the entire membership seemed to be that if we would secure speakers from our own county, and hold our own institutes we would derive more real benefit therefrom. The members voted in the negative on a proposition to continue the State appropriations.

The idea of raising \$40,000 for a Court House was opposed.

Shlawassee Co. M. VAN, Cor. Sec.

SALEM FARMERS' CLUB.

The discussion was general, having the effect of stirring up the usually silent ones. Great earnestness was manifest on both sides. When put to a vote the majority voted to refuse State aid.

An excellent report was listened to from the delegates to the State Association, Daniel Thompson and Mrs. Kate Smith.

Washtenaw Co. C. L. ROSS, Cor. Sec.

WALLED LAKE FARMERS' CLUB.

At the close of a full and thorough discussion of the Farmers' Institute question, this club decided against State appropriations by a vote of thirty to five. The proposition voted upon was, Resolved, That the appropriation for Farmers' Institutes is right and belongs to the farmers. Yeas, five; nays, thirty.

Oakland Co. REPORTER.

WALES FARMERS' CLUB.

The subject was taken up under several subdivisions and decided as follows: Should the superintendent of institutes be a practical farmer?

Yes. Is there too much one man power manifested in their present management? Yes, so far as the location of the meetings is concerned. Should the conductor be furnished by the State, or by the local committee? By local committee. Are the State speakers who are sent out satisfactory to the farmers? Yes. Is their pay, which ranges from three to five dollars per day and all expenses, proportionate to the work performed? No. Is it too much or too little? Too much. There should be an itemized statement of the expenditures of the Institute fund, showing the per diem and the total amount received from the fund by each employee, published in the Institute Bulletin sent out at the end of the year.

The principal work done was the consideration of the report of our delegate to the State Association.

MRS. ALBERT HAND, Cor. Sec.

St. Clair Co. WASHINGTON FARMERS' CLUB.

An expression was taken by the club on the question, Should our institutes be supported by taxation? resulting in the negative. Are there more points in favor of the present management than against? Yes.

Mrs. Arthur Newberry read a paper on "A glimpse at some of our charities." The great question is not how to dispense, but how to prevent the need of charity. Let us attempt to diminish the springs that flow into the rivers of want.

"Are farmers' wives over-worked?" was introduced by L. Lockwood, who said three-fourths of the women are over-worked; some from choice, others from force of circumstances. Some obituaries are written, "She died from over-work" when they ought to read, "She fretted or jawed herself to death." Mrs. Snook said the over-work often came from inability to obtain help when needed.

Macomb Co. C. E. C., Cor. Sec.

WHITE LAKE FARMERS' CLUB.

All favored the Farmers' Institutes, although there was a difference of opinion regarding State appropriations. A published itemized account of all the expenditures of the appropriation would enable us to better determine the wisdom of the expenditures. This appropriation is for the special benefit of a certain class of our citizens and ought not to be made, not on account of the expense involved, for each bears but a small portion, but because the principle is not right, and because it establishes a dangerous

precedent. H. Walter: This money is well expended. E. P. Flower: The legislature must have had an axe to grind when it offered the farmers this plum. It is wrong in principle. L. Brown: We farmers ought not to kick for we seldom get such a chance. W. E. Clark: It is all right. All classes attend the institutes and get the benefit. J. I. Cole: The work once needed the help, but now it has progressed sufficiently to be carried on without the appropriation.

Oakland Co. J. J., Cor. Sec.

WEST AVON FARMERS' CLUB.

This club expressed its opinion in the following resolution:

Resolved, That in our opinion Farmers' Institutes are a substantial benefit to the farmers of the State, and that we are in favor of any reasonable appropriation that will increase their interest.

Mrs. C. R. Cook led with a paper the discussion of the question, "Can women successfully combine public and private life?" She said in part, if we can determine woman's sphere it will settle the question. Even the animals show what nature has taught them in caring for their homes and families. Is it women's God-given duty to care for their homes and their families, and leave the ballot, etc., to the men. Mrs. Hilton though women were just as well qualified to vote as men. Mrs. Fisher said the best years of a farmer's wife are spent in raising and caring for her family, and that to vote intelligently and conscientiously would require much more study than she is able to give it.

MRS. L. W. FISHER, Cor. Sec.

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Gentlemen—Last season I used one of your Success Anti-clog Weeder. Bought it of my brother, R. H. Jones, and I wish to let you know how much pleased I am with the Weeder. One of my neighbors was afraid to buy, but he was not afraid to borrow. He borrowed mine and said he went over his turnips with it and was very much pleased with the Weeder and the good work it did.

For myself I can say a great deal of my corn—never saw a hoe in the field during the entire season. One piece I planted a little too thick; so when it was about one foot high I wished to thin it out so it would ear better. So I took the Weeder and started in; went lengthwise and crosswise, and every other way that I could drive my horse, thinking it might break off some of the stalks; but I can safely say that I did not break off two stalks in the whole field.

Before I had commenced to use my Weeder many of my neighbors thought that it would tear up the corn and potatoes. But after they had seen me give it this thorough trial they were convinced that it would not harm the corn in the least. The fact is, I am sure the Weeder will not injure any crop grown on the farm. It is very important, however, that the Weeder be started early. If the weeds are allowed to get a good start the Weeder will simply cultivate them, as it does the crop.



Patent Allowed

Yours truly, W. R. JONES.

CENTER, N. Y.

Messrs. D. Y. HALLOCK & SON, Gentlemen—How about the price of your Weeder for the coming season? Is it the same as last year? I intend to sell quite a good many. I used the Weeder I purchased of you last year on everything I raised, including even onions, and it worked to perfection on everything. I can honestly say I would not be without it for \$50, if I could not get another just like it.

Yours truly, T. B. NICHOLS.

CENTER, N. Y.

Messrs. D. Y. HALLOCK & SON, York, Pa.

Dear Sirs—I intend to sell just as many Weeders as I can this Spring. I bought one last Spring for my own use and they are certainly a complete success, and I would not think of farming without one. Last Spring, in April, I contracted to cut and haul to the saw mill a lot of lumber; so I took all my men away, leaving only my fourteen year old boy on the farm. Now, I will tell you what he did. He took the entire care of thirty-five acres of corn and twelve acres of potatoes, working both crops entirely with the Weeder, and I never saw a finer crop in my life.

The secret of Success in using your Weeder is to start it early, before anything grows, and keep the soil stirred so no weeds will grow. No farmer can afford to farm without a Weeder, and all will own one just as soon as they realize its value.

Yours truly,

HEZEKIAH GONGAMERE.

Messrs. D. Y. HALLOCK & SON, York, Pa.

Dear Sirs—Your favor of recent date, wishing to know if I am going to handle the Success Anti-clog Weeder the coming season received. I certainly am if you will permit me to, and I intend to push them for all they are worth.

I let my Weeder go wherever the farmers wanted to try it, and they all pronounced it a grand success; declared that it did fine work. The Weeder that I kept for my own use I would not take \$20 for if I could not get another just like it.

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